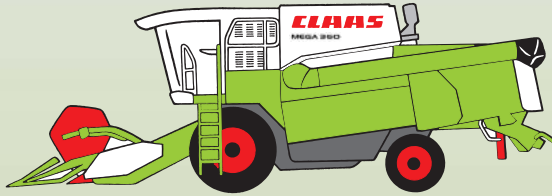


CLAAS



MEGA 360 - 350

Technical Systems

Electric System

SERVICE & PARTS

Layout of electric circuit diagrams

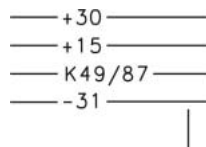
Following the circuit diagram layout, all electric circuits are shown in individual circuit diagrams. Some explanations are given below to illustrate the layout.

Numbering of circuit diagrams

Meg-e-01a

- The respective numbering can be found on the corresponding cover sheet and in the footer.
- Depending on the machine no., the components fitted and the country specification, there may be several individual circuit diagrams 01b, 01c, etc. for a given function.

Potentials

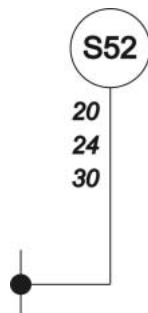


- Main power supply (battery)
- Ignition switch power supply (switched)
- Relay-controlled power supply
- Earth
- Housing earth (external)

Connections

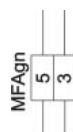


- The description provided **inside** the circle (e.g. „S52”) defines the connection.
- Numbers **next to** the circle (e.g. „4”) describe the continuation of the cabling in accordance with the circuit diagram numbering. This circuit diagram numbering can be taken among others from the footer.

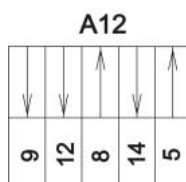


Example: Many electric circuits depend on the road travel activation switch S52 (see circuit diagram 04a). Therefore there are functions on circuit diagrams 20, 24 and 30 which can only be activated when S52 is closed.

Designations



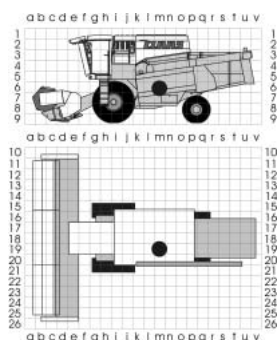
- Connectors (e.g. „MFAgn”, pin 3 and 5) .
Each chapter lists the respective connectors and their pin assignment in the individual connection tables.



- Modules (e.g. „A12 - Speed monitor“)
The arrows identify the functional inputs and outputs according to the assignment table provided in chapter **ZE**.

6-m-19

- Position of components according to component grid coordinates



A 1 ... Z 99

- Component designation according to CLAAS standards catalogue

- A - Terminal / Module
- B - Sensor
- E - Lighting
- F - Fuse
- G - Voltage Source
- H - Signalling Device / Lamp
- K - Relay
- M - Electric Motor
- P - Gauge
- R - Potentiometer / Resistor
- S - Switches – Cab Operation
- T - Switches – Terminal Operation
- U - Switches – External Operation
- V - Electronic Component
- W - Antenna
- X - Connector
- Y - Solenoid coil
- Z - Actual Value Function Switch

Connections list

from	to 1	mm ²	Colour
HKB-17	K77/86	0.75	br
KBA-10	Y 25	0.5	bk
WSA- 5	S 54	0.5	bl-wh

- List of connections within the central terminal compartment, stating cross-section (mm²) and colour of cables connected to the machine.

- rd - red
- bk - black
- br - brown
- wh - white
- bl - blue
- gr - grey
- ye - yellow
- gn - green
- pi - pink
- or - orange
- vi - violet

CONTENTS

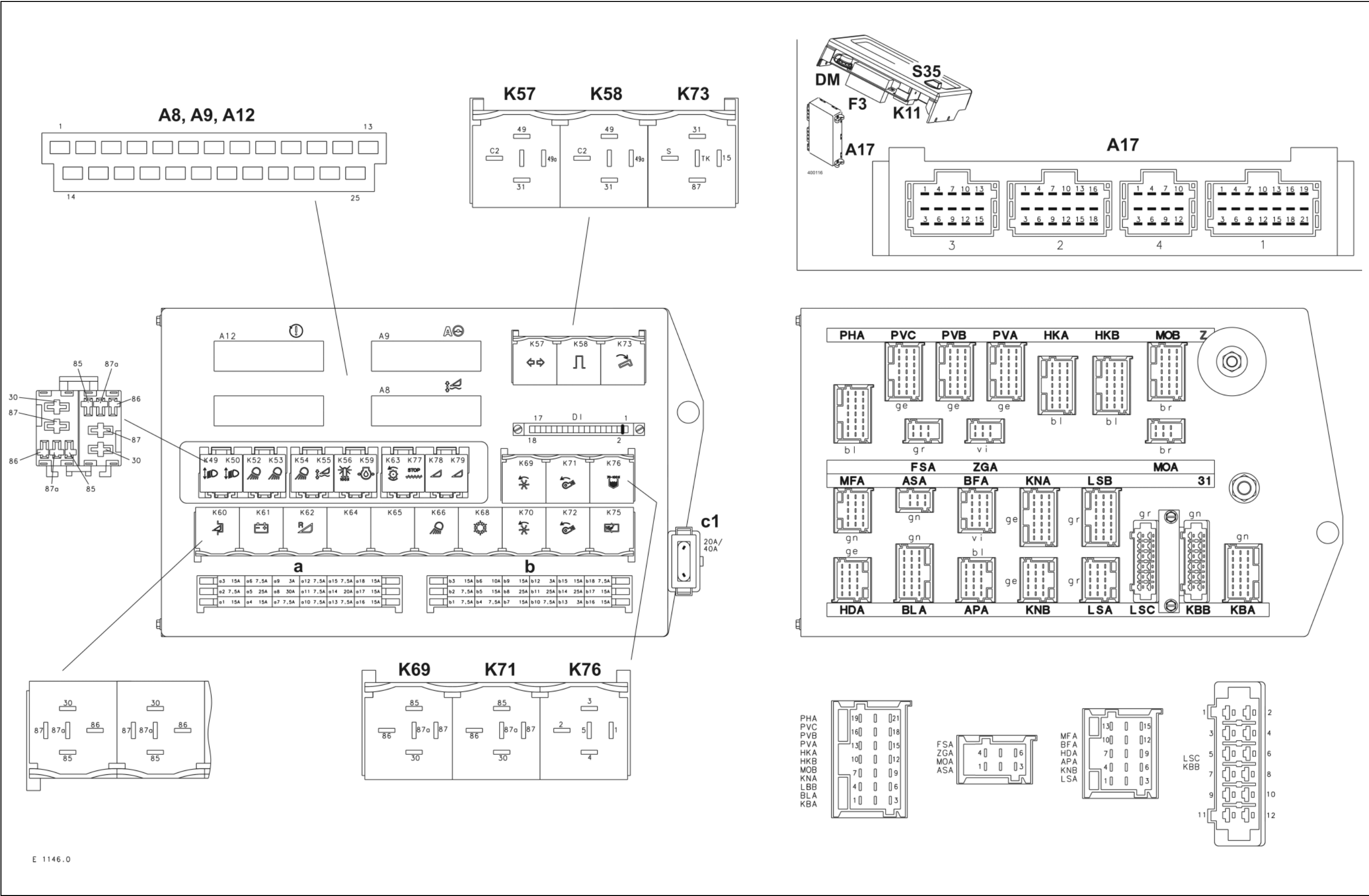
Central terminal compartment	ZE-2
Pin assignment in modules.....	ZE-6
Automatic air conditioner module A6:.....	ZE-7
Cab fan speed controller module A7:	ZE-7
AUTOCONTOUR module (CAC) A8:	
Spare part no. 011 015.x.....	ZE-8
Contour module A8: Spare part no. 011 026.x	ZE-8
AUTOPILOT module A9:.....	ZE-9
Speed monitor module A12:.....	ZE-9
Electronic engine control module A15:.....	ZE-10
Engine adaptation module (ADM) A17:.....	ZE-10
Yield meter module A21:.....	ZE-11
Deflector adjustment module A26:	ZE-11
1a Main power supply, Diesel engine electric starting motor	1a-2
2a Starting the diesel engine, Diesel engine speed adjustment.....	2a-2
3a Diesel engine cut-off system	3a-2
4a Activation of road travel.....	4a-2
5a Fieldwork computer	5a-2
7a Threshing mechanism circuit up to serial no. 835 00146, 845 00123	7a-2
7b Threshing mechanism circuit from serial no. 835 00147, 845 00124	7b-2
10a Fan variable-speed drive.....	10a-2
12a Deflector adjustment, Performance monitor	12a-2
14a Swinging the grain tank unloading tube	14a-2
15a Grain tank unloading	15a-2

Electric system	MEGA	TIC
17a	Front attachment drive, Reverser drive (electric).....	17a-2
17b	Front attachment drive, Reverser drive (hydraulic) up to serial no. 835 00146, 845 00123	17b-2
17c	Front attachment drive, Reverser drive (hydraulic) from serial no. 835 00147, 845 00124	17c-2
19a	Reel variable-speed drive	19a-2
20a	Front attachment raise/lower, Transverse control.....	20a-2
21a	Reel adjustment.....	21a-2
21b	Folding the maize picker / Snapping plate adjustment	21b-2
23a	Folding the cutterbar.....	23a-2
24a	AUTOCONTOUR (CAC).....	24a-2
24b	CONTOUR	24b-2
25a	Speed monitoring	25a-2
26a	Machine monitoring up to serial no. 835 00146, 845 00123	26a-2
26b	Machine monitoring from serial no. 835 00147, 845 00124	26b-2
27a	Yield meter	27a-2
28a	AUTOPILOT	28a-2
29a	All-wheel drive	29a-2
30a	Grain tank full indicator / Warning beacon	30a-2
31a	Turn flasher system	31a-2
32a	Main light circuit, position light.....	32a-2
33a	Dipped headlights, dipped headlights changeover	33a-2
34a	Work lights up to serial no. 835 00146, 845 00123.....	34a-2
34b	Work lights from serial no. 835 00147 845 00124	34b-2
35a	Grain tank, sieve pan and returns lighting, reversing horn, brake light	35a-2

TIC	MEGA	Electric system
36a	Interior lights, instrument lighting.....	36a-2
37a	Windscreen wiper.....	37a-2
38a	Compressor-type air conditioner, cab fan	38a-2
38b	Automatic air conditioner (Climatic).....	38b-2
39a	Air-suspended seat compressor.....	39a-2
40a	Additional sockets	40a-2
Component grid		R-2
Index	index-2

Central terminal compartment

Central terminal compartment



Key to diagram:

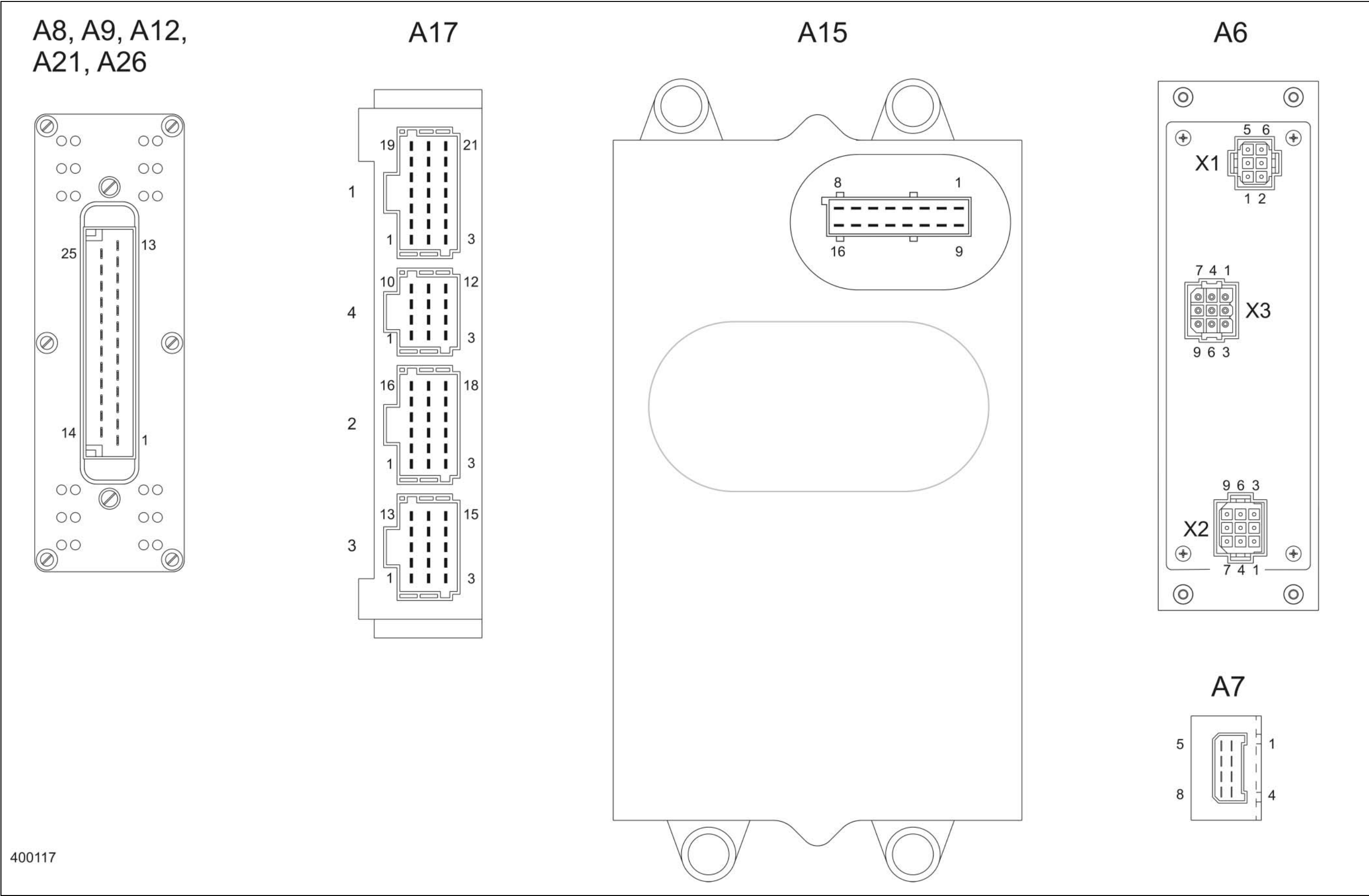
a	Fuse block a	ZE
a1	Left-hand work lights fuse.....	34
a2	Grain tank unloading tube / Reel adjustment fuse ..	14, 21
a3	Cab outside work lights fuse.....	34
a4	not used	
a5	Lights main circuit fuse	32
a6	CAC / Cab electric system fuse	24, 36
a7	Lights main circuit fuse	32
a8	Cab fan fuse	38
a9	Fieldwork computer fuse	12, 24, 26, 30
a10	Lights main circuit fuse	32
a11	Windscreen wiper fuse	37
a12	Road travel activation / Fieldwork computer fuse ...	4, 10
a13	Lights main circuit fuse	32
a14	Engine control unit fuse	2
a15	Safety shutdown switch	7
a16	Work lights fuse	34
a17	Front attachment circuits / Reel adjustment fuse	20, 21, 23, 40
a18	Lighting, sieve pan, grain tank and returns fuse	35
A 8	AUTOCONTOUR module (CAC)	20, 24
A 9	AUTOPILOT module (ATP)	28
A12	Speed monitor module (DZW).....	25
A17	Engine adaptation module (ADM)	1, 2
b	Fuse block b	ZE
b1	Right-hand dipped headlights fuse	33
b2	Fieldwork computer / Flasher fuse	1, 3, 5, 26, 28, 31
b3	Warning beacon fuse.....	30, 40
b4	Left-hand dipped headlights fuse	33
b5	Flasher system fuse	31
b6	Instrument lighting fuse	25, 26, 29, 33, 35, 36
b7	Work lights fuse	34
b8	Work lights fuse	34
b9	Horn fuse	35, 39
b10	Threshing mechanism fuse	7, 10, 12, 28
b11	Fan variable-speed drive fuse	10
b12	Relay K59 control fuse	3, 38
b13	Speed monitor fuse	10, 25
b14	Reel variable-speed drive.....	19
b15	Generator release fuse.....	3
b16	Additional sockets fuse.....	40
b17	Cooling unit, air conditioner fuse	38
b18	Fieldwork computer / Yield meter fuse	5, 27
c	Front attachment reverse fuse (40 A electric, 20 A hydraulic).....	ZE, 17
DI	Diode PCB	2, 3, 24, 25, 26, 30
DM	Daimler-Chrysler diagnosis plug	2
F 3	Engine fuse block	ZE, 2

Key to diagram:

K11	Start relay	1
K49	Dipped headlights relay	33
K50	Dipped headlights relay	33
K52	Work lights far relay	34
K53	Right-hand cab work light relay	34
K54	Left-hand cab work light relay	34
K55	Contour circuit relay	24
K56	Warning beacon relay	30
K57	Transducer	31
K58	Transducer	3
K59	Engine oil pressure relay	3
K60	Road travel release relay	4, 19, 20, 34
K61	Generator release relay	1, 3, 4, 10, 30
K62	Front attachment reverse relay	17
K63	Threshing mechanism relay	7, 10, 12, 25, 28a
K66	Taillight relay	34
K68	Cooling system relay	38
K69	Reel speed adjustment relay	19
K70	Reel speed adjustment relay	19
K71	Fan speed relay	10
K72	Fan speed relay	10
K73	Swing grain tank unloading tube relay	14
K75	Additional power supply relay	35, 38
K76	Grain tank full sensor relay	30
K77	Safety shutdown switch relay	7, 15, 17, 19
K78	Front attachment identification relay	17, 19
K79	Front attachment identification relay	17, 25
K86	Deflector adjustment relay	12
S35	Engine speed adjustment switch	2

Pin assignment in modules

Pin assignment in modules



Automatic air conditioner module A6:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
X 1/ 1	Terminal 61	G 2	12 V	Input	38b
X 1/ 2	Power	a8 / 30A	12 V	Input	38b
X 1/ 5	Instrument lighting	E 35	12 V	Output	36a
X 1/ 6	Earth	-31	0 V	Input	38b
X 2/ 1	Icing protection	Z 74	12 V	Output	38b
X 2/ 2	Heater solenoid coil	Y109	12 V (PWM)	Output	38b
X 2/ 3	PWM fan	M 7	12 V (PWM)	Output	38b
X 2/ 9	Power	a8 / 30A	12V	Input	38b
X 3/ 1	Inside temperature	B86	-20° - 97070 Ω	---	38b
X 3/ 2	Inside temperature	B86	-10° - 55330 Ω	---	38b
X 3/ 3	Blow-out temperature	B87	0° - 32650 Ω	---	38b
X 3/ 4	Blow-out temperature	B87	10° - 19900 Ω	---	38b
X 3/ 5	Outside temperature	B88	20° - 12490 Ω	---	38b
X 3/ 6	Outside temperature	B88	30° - 8057 Ω	---	38b
			40° - 5327 Ω		
			50° - 3603 Ω		
			60° - 2488 Ω		

Cab fan speed controller module A7:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Earth	-31	0 V	Output	38b
2	not used	---	---	---	---
3	not used	---	---	---	---
4	Power	M7	0-12 V	Output	38b
5	Earth	M7	0 V	Input	38b
6	not used	---	---	---	---
7	PWM fan	A6	12 V (PWM)	Input	38b
8	Power	A7	12 V	Input	38b

AUTOCONTOUR module (CAC) A8: Spare part no. 011 015.x

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Cutterbar release	S52	12V	Input	24a
2	Pre-set cutting height control ON	S13	Earth	Input	24a
3	Cutterbar right-hand transverse control	Y67	Earth	Output	20a
4	not used				
5	AUTOCONTOUR indicator (LED)	H37	Earth	Output	24a
6	Pre-set cutting height control indicator (LED)	H38	Earth	Output	24a
7	not used				
8	Earth	31	Earth	Input	24a
9	not used				
10	Cutterbar left-hand transverse control	Y68	Earth	Output	20a
11	Lower cutterbar	Y87	Earth	Output	20a
12	Raise cutterbar	Y85	Earth	Output	20a
13	CAC main switch	S11	Earth	Input	24a
14	12 V power supply (terminal 15)	S52	12V	Input	4a
15	CAC ON	S12	Earth	Input	24a
16	Earth	31	Earth	Input	24a
17	Earth	31	Earth	Input	24a
18	12 V power	a6	12V	Input	24a
19	Pre-set cutting height control actual value	R8	0.25-4.75 V	Input	24a
20	5 V reference output	R1, R2, R23, R24	5V	Output	24a
21	Right-hand sensing band actual value	R2, B4	0.25-4.75 V	Input	24a
22	Left-hand sensing band actual value	R1, B3	0.25-4.75 V	Input	24a
23	Spring actual value	R22	0.25-4.75 V	Input	24a
24	CAC set value	R23	0.25-4.75 V	Input	24a
25	Pre-set cutting height control set value	R24	0.25-4.75 V	Input	24a

Contour module A8: Spare part no. 011 026.x

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Cutterbar release	S52	12 V	Input	24a
2	Pre-set cutting height control ON	S13	Earth	Input	24a, 24b
3	Cutterbar right-hand transverse control	Y67	Earth	Output	20a
4	not used	-	-	-	-
5	AUTOCONTOUR indicator (LED)	H37	Earth	Output	24a
6	Pre-set cutting height control indicator (LED)	H38	Earth	Output	24a
7	not used	-	-	-	-
8	Earth	31	Earth	Input	24a
9	not used	-	-	-	-
10	Cutterbar left-hand transverse control	Y68	Earth	Output	20a
11	Lower cutterbar	Y87	Earth	Output	20a
12	Raise cutterbar	Y85	Earth	Output	20a
13	CAC main switch	S11	Earth	Input	24a
14	12 V power supply (terminal 15)	S52	12 V	Input	4a
15	not used	-	-	-	-
16	Earth	31	Earth	Input	24a
17	Earth	31	Earth	Input	24a
18	12 V power	a6	12 V	Input	24a
19	Pre-set cutting height control actual value	R8	0.25-4.75 V	Input	24a
20	5 V reference output	R1, R2, R23, R24	5V	Output	24a
21	Right-hand sensing band actual value	R2, B4	0.25-4.75 V	Input	24a
22	Left-hand sensing band actual value	R1, B3	0.25-4.75 V	Input	24a
23	Spring actual value	R22	0.25-4.75 V	Input	24a
24	CAC target value	R23	0.25-4.75 V	Input	24a
25	Pre-set cutting height control set value	R24	0.25-4.75 V	Input	24a

AUTOPILOT module A9:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	AUTOPILOT main switch	S10	12 V/7.5 A	Input	28a
2	AUTOPILOT main switch	S10	12 V/7.5 A	Input	28a
3	Steering left	Y10	0V	Output	28a
4	Steering left	Y10	0V	Output	28a
5	Seat contact signal	Z5	Earth	Input	28a
6	ATP (Autopilot) control	H2	0 V	Output	28a
7	not used	-	-	-	-
8	Earth	31	Earth	Input	28a
9	Earth	31	Earth	Input	28a
10	Solenoid coils +	Y9, Y10	12 V	Output	28a
11	Solenoid coils +	Y9, Y10	12 V	Output	28a
12	Steering right	Y9	0V	Output	28a
13	Steering right	Y9	0V	Output	28a
14	AUTOPILOT wheel position	B6	0.25-4.75 V	Input	28a
15	AUTOPILOT ON	S9	Earth	Input	28a
16	ATP signal OFF	B83	Earth	Input	28a
17	AUTOPILOT wheel position GND	B6	0 V	Output	28a
18	AUTOPILOT wheel position POWER SUPPLY	B6	5 V	Output	28a
19	Connection with pin 20	-	-	-	28a
20	Connection with pin 19	-	-	-	28a
21	ATP. pushbutton	B7, B8	5 V	Output	28a
22	ATP. pushbutton	B7, B8	0 V	Output	28a
23	AUTOPILOT centralizing switch	R3	0.25-4.75 V	Input	28a
24	AUTOPILOT left pushbutton	B7	0.25-4.75 V	Input	28a
25	AUTOPILOT right pushbutton	B8	0.25-4.75 V	Input	28a

Speed monitor module A12:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Straw walker warning light	H35	12 V	Output	25a
2	Straw walker speed signal	B26	1.0 - 1.2 kΩ	Input	25a
3	Earth	-31	0V	Input	25a
4	Returns elevator warning light	H36	12V	Output	25a
5	Returns warning light	B10	1.0 - 1.2 kΩ	Input	5a
6	---	---	---	---	---
7	---	---	---	---	---
8	Power input 12 V / 3 A	b13/3A	12 V	Input	25a
9	Grain elevator warning light	H32	12 V	Output	25a
10	Feeder housing speed signal	B12	1.0 - 1.2 kΩ	Input	25a
11	Chopper in working position	Z59	0 V	Input	25a
12	Feeder housing warning light	H27	12 V	Output	25a
13	Straw chopper warning light	H34	12 V	Output	25a
14	Pulse relay warning message	H 4	---	Output	25a
15	---	---	---	---	---
16	Returns speed signal	B29	1.0 - 1.2 kΩ	Input	25a
17	---	---	---	---	---
18	---	---	---	---	---
19	---	---	---	---	---
20	---	---	---	---	---
21	Grain elevator speed signal	B21	1.0 - 1.2 kΩ	Input	25a
22	---	---	---	---	---
23	---	---	---	---	---
24	---	---	---	---	---
25	Straw chopper speed signal	B28	1.0 - 1.2 kΩ	Input	25a

Electronic engine control module A15:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
X1/ 1	CAN-H	---	---	---	2b
X1/ 2	CAN-L	---	---	---	2b
X1/ 3	HF-GND	---	---	---	2b
X1/ 4	HF-GND	---	---	---	2b
X1/ 5	12 V power (terminal 30)	---	12 V	Input	2b
X1/ 6	12 V power (terminal 30)	---	12 V	Input	2b
X1/ 8	Electric starting motor power (terminal 50)	---	12 V	Input	2b
X1/ 9	Earth	---	0 V	Input	2b
X1/11	Earth	---	0 V	Input	2b
X1/13	Diagnosis	DM	---	---	2b
X1/15	12 V power (terminal 15)	---	12 V	Input	1a

Engine adaptation module (ADM) A17:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1/01	12 V input power (terminal 30)	---	12 V	Input	2b
1/02	12 V input power (terminal 15)	---	12 V	Input	2b
1/03	Earth	---	0 V	Input	2b
2/05	Earth	---	0 V	Input	2b
2/06	Engine speed signal (max.)	S35	0 V	Input	2b
2/10	Engine speed signal (3 rd gear)	Z41	0 V	Input	2b
3/13	CAN-LH (J 1939)	---	---	---	2b
3/14	CAN-HF-GND (J 1939)	---	---	---	2b
3/15	CAN-LL (J 1939)	---	---	---	2b
4/02	Diagnosis	---	---	---	2b
4/03	Diesel engine oil pressure signal light	H50	12 V	Output	3b
4/04	Cooling water temperature display	P8	---	Output	3b

Yield meter module A21:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	---	---	---	---	---
2	Earth (GND)	31	Earth	Input	27a
3	CAN high	-	-	-	27a
4	---	---	---	---	---
5	Yield signal	B59	1.2 V / >2.5 V	Input	27a
6	---	---	---	---	---
7	---	---	---	---	---
8	---	---	---	---	---
9	---	---	---	---	---
10	Inclination – actual value signal	B62	1.2-4.8 V	Input	27a
11	Humidity + signal	B61	---	Input	27a
12	---	---	---	---	---
13	---	---	---	---	---
14	---	---	---	---	---
15	Power	b18 / 7.5 A	12 V / 1 A	Input	27a
16	CAN low	-	-	-	27a
17	---	---	---	---	---
18	---	---	---	---	---
19	---	---	---	---	---
20	Power	b18 / 7.5 A	12 V / 10 A	Input	27a
21	Humidity - signal	B61	---	Input	27a
22	Humidity temperature signal	B61	---	Input	27a
23	Inclination – actual value signal	B62	1.2-4.8 V	Input	27a
24	---	---	---	---	---
25	---	---	---	---	---

Deflector adjustment module A26:

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Power I	M22	12 V	Output	12a
2	Power I	M22	12 V	Output	12a
3	Power II	M22	12 V	Output	12a
4	Power II	M22	12 V	Output	12a
5	Power	K86	12V / 15 A	Input	12a
6	Power	K86	12 V / 15 A	Input	12a
7	---	---	---	---	---
8	Earth (GND)	31	Earth	Input	12a
9	Earth (GND)	31	Earth	Input	12a
10	Linear motor – actual value signal	R28	0.25-4.75 V	Input	12a
11	Linear motor – set value signal	R29	0.25-4.75 V	Input	12a
12	Linear motor reference voltage	R28, R29	5 V	Output	12a
13	Linear motor reference output	R28, R29	Earth	Output	12a
14	---	---	---	---	---
15	---	---	---	---	---
16	---	---	---	---	---
17	---	---	---	---	---
18	---	---	---	---	---
19	---	---	---	---	---
20	---	---	---	---	---
21	---	---	---	---	---
22	---	---	---	---	---
23	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---

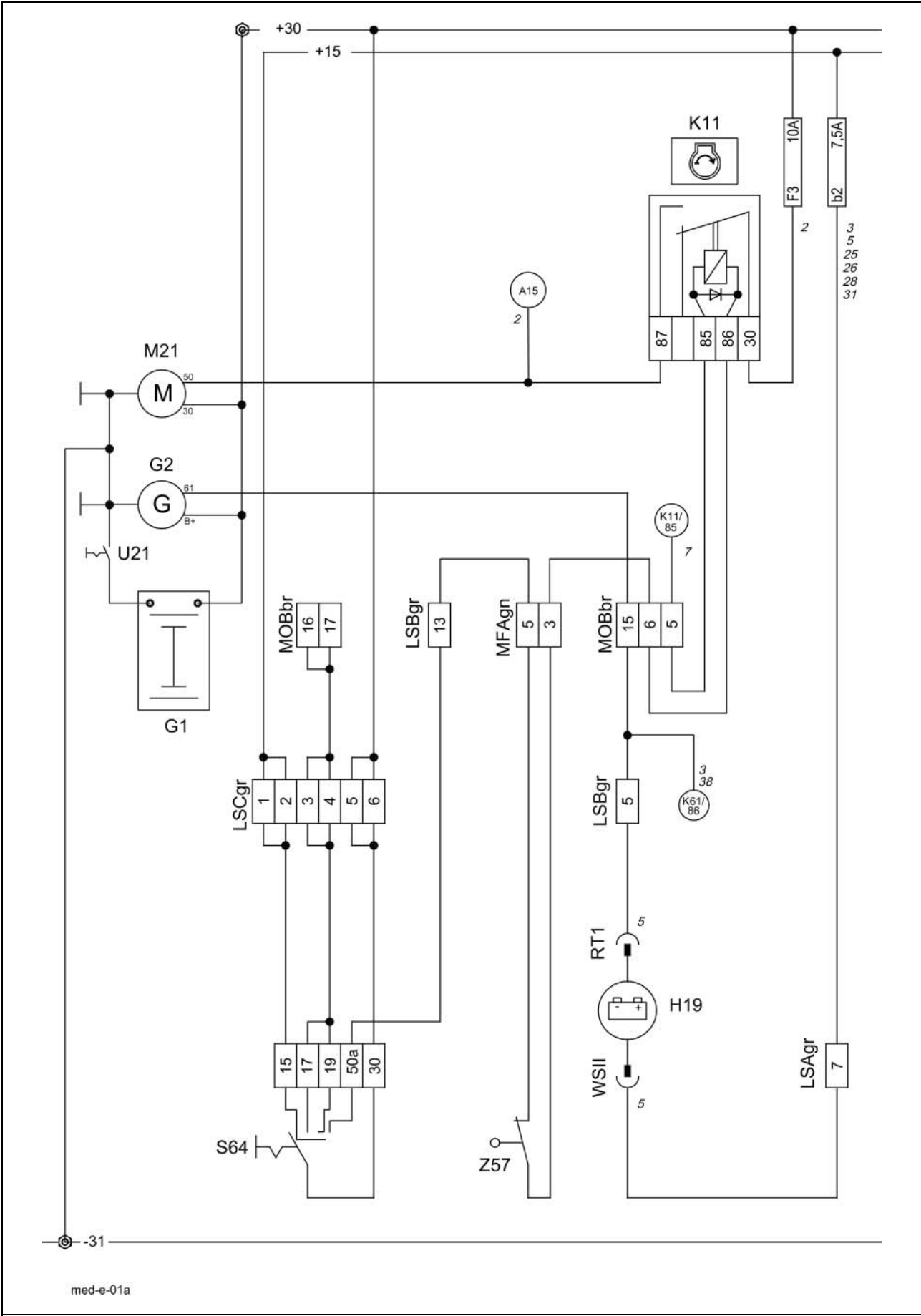
List of fuses:

Fuse	Circuit diagram	Circuit diagram	Circuit diagram	Circuit diagram	Circuit diagram	Circuit diagram	Circuit diagram
a1	34						
a2	14	21					
a3	34						
a4							
a5	32						
a6	24	36					
a7	32						
a8	38						
a9	12	24	26	30			
a10	32						
a11	37						
a12	4	10					
a13	32						
a14	2						
a15	7						
a16	34						
a17	20	21	23	40			
a18	35						
b1	33						
b2	1	3	5	26	28	31	
b3	30	40					
b4	33						
b5	31						
b6	25	26	29	33	35	36	
b7	34						
b8	34						
b9	35	39					
b10	7	10	12	28			
b11	10						
b12	3	38					
b13	10	25					
b14	19						
b15	3						
b16	40						
b17	38						
b18	5	27					
c1	17						
F3	1	2					

1a

**Main power supply,
Diesel engine electric starting motor**

1a Main power supply, Diesel engine electric starting motor



Key to diagram:

		Coordinates
A15	Electronic engine control module (PLD)	5-i-18
G1	Battery	6-n-20
G2	Generator	3-j-17
H19	Generator charging light	3-g-18
K11	Start relay	4-h-17
K61	Generator release relay	4-g-17
M21	Electric starting motor	3-j-19
S25	Main drive (threshing mechanism clutch)	3-h-17
S64	Ignition switch	3-g-18
U21	Battery isolating switch	6-n-20
Z57	Ground speed control lever safety start switch	4-g-17

Measured value table:

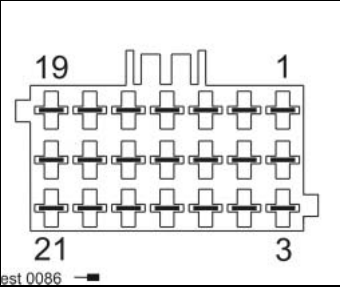
Item	Component	Measured value	Remark
K11	Remote control relay	85±7 Ω	(Pin 85 - Pin 86)
K61		20 A	(Pin 30 - Pin 87a)
		40 A	(Pin 30 - Pin 87)

Description of function:

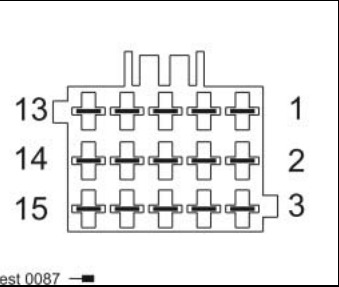
	<p>A plus potential (+30) is fed in via the central power supply from the positive terminal of battery (G1) and/or from generator (G2) pin 30. The minus terminal of battery (G1) and the central earthing point (-31) are connected to the machine chassis.</p>
Ignition ON	<p>With the ignition switched on, battery plus (+30) is passed on as switched plus (+15) via the ignition switch (S64).</p>
Electric starting motor circuit	<p>The start relay K11 is used as safety start switch only if the ground speed control lever is in neutral position and consequently the ground speed control lever safety start switch (Z57) is closed. At the same time, the threshing mechanism must be switched off at switch S 25. When the power supply is applied at the electric starting motor, the start relay (K11/87) applies a signal voltage in parallel to the electronic engine control module (A15) and sets the electronic injection unit to start mode.</p>
Generator release	<p>With the generator (G2) running, the generator release relay (K61) switches battery plus (+30) on to generator release relay (K61/87). Perfect generator function therefore is the pre-condition for the system operating voltage.</p>
Generator charging light	<p>With the ignition switched on, the generator charging light (H19) must light up in order to excite the generator (G2) internally. When the generator charging light (H19) lights up while the engine/generator are running, no charging voltage is generated – a total failure of the generator must be assumed. In this case, buzzer H 44 and the signal lights "Stop" (H42) in the operations display screen and/or the warning light (H45) on the vehicle information unit are permanently activated as a warning (see circuit diagram 3a and/or 3b).</p>

Connector pin assignment:

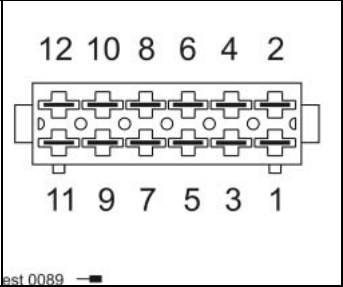
Connector LSBgr, MOBgr



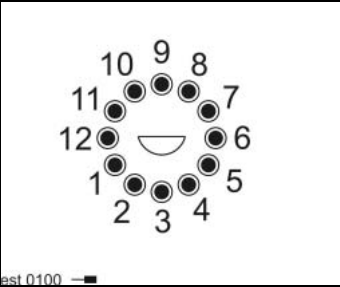
Connector MFAGn



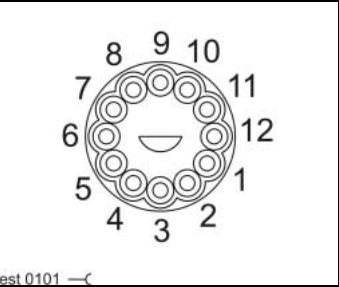
Connector LSCgr



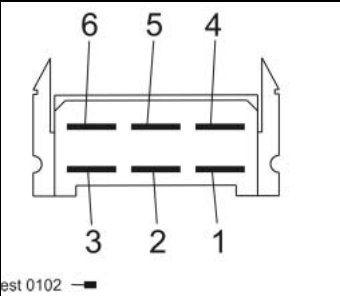
Connector RT 1



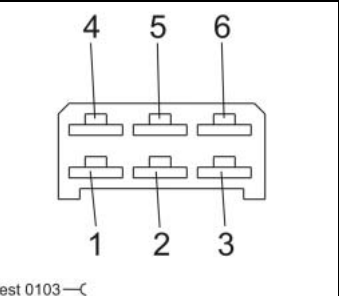
Socket RT 1



Connector WS II



Socket WS II



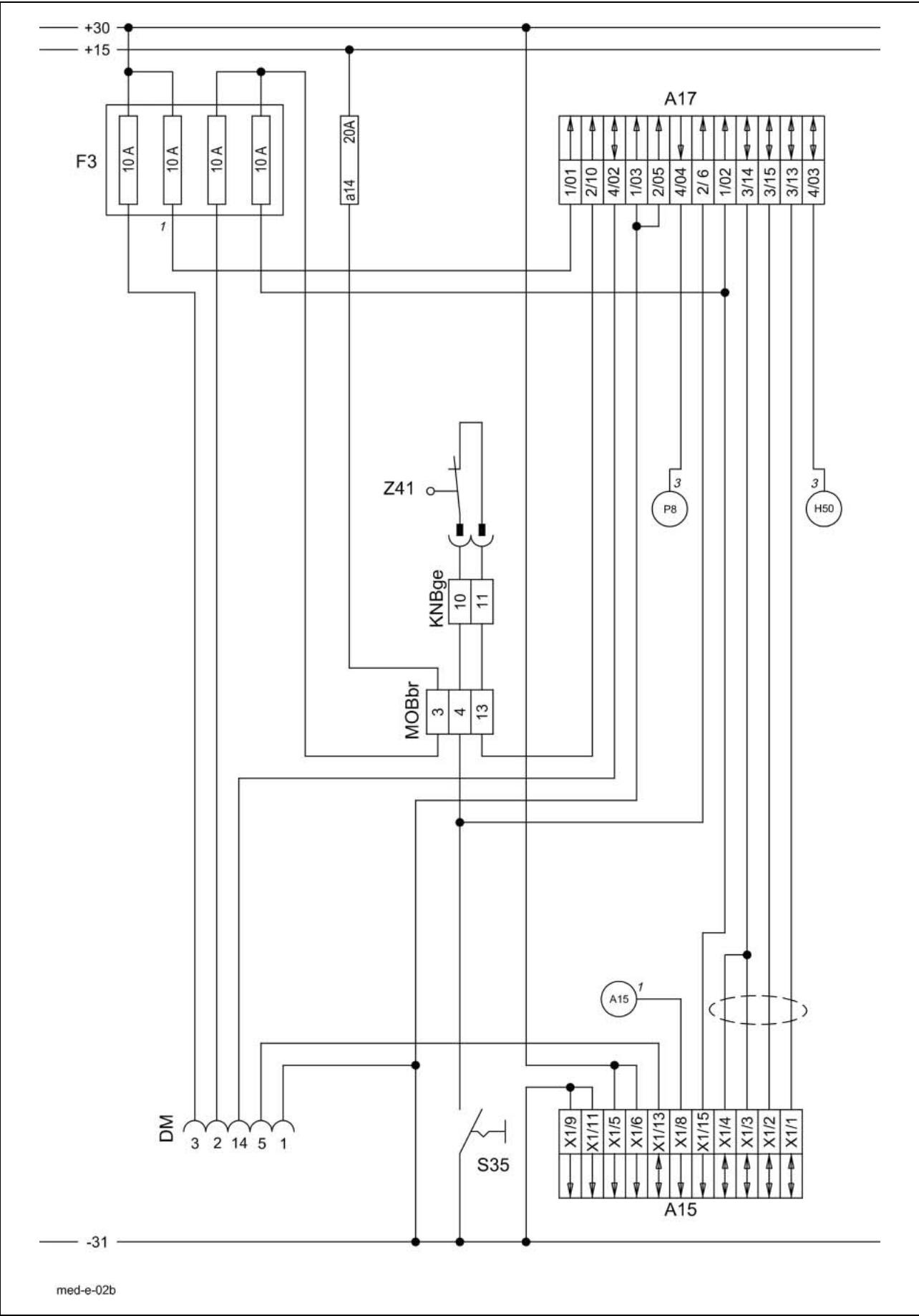
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSAgr - 7	LSA 7	b2a				1.5	bk
LSBgr - 5	LSB 5	K61/86	MOB 15			0.75	bl
LSBgr - 13	MFA 5	LSB 13				0.75	bk/ye
LSCgr - 1	b2e	LSC 2	a11e	b15e	a14e	4	bk
	b3e	b6e	b9e	b12e	a9e		
	a15e						
LSCgr - 2	b2e	LSC 1	a11e	b15e	a14e	4	bk
	b3e	b6e	b9e	b12e	a9e		
	a15e						
LSCgr - 3	LSC 4	MOB 16	MOB 17			2.5	gr/rd
LSCgr - 4	LSC 3	MOB 16	MOB 17			2.5	gr/rd
LSCgr - 5	Z	K54/30	c1e	b5e	b16e	4	rd
	a6e	b11e	b14e	b17e	K60/30		
	K52/30	K53/30	a5e	b7e	LSC 6		
LSCgr - 6	Z	K54/30	c1e	b5e	b16e	4	rd
	a6e	b11e	b14e	b17e	K60/30		
	K52/30	K53/30	a5e	b7e	LSC 5		
MFAGr - 3	MOB 6					0.75	bk/ye
MFAGr - 5	LSB 13					0.75	bk/ye
MOBbr - 5	PHA 9					0.75	br/gr
MOBbr - 6	MFA 3					0.75	bk/ye
MOBbr - 15	LSB 5	K61/86				1	bl
RT 1 - 5						0.75	bl
WS II - 5						1.5	bk

2a

**Starting the diesel engine,
diesel engine speed adjustment**

2a Starting the diesel engine, diesel engine speed adjustment



Key to diagram:		Coordinates
A15	Electronic engine control module.....	5-i-18
A17	Engine adaptation module (ADM).....	4-h-17
DM	Daimler-Chrysler diagnosis plug	4-h-17
F3	Engine fuse block.....	4-h-17
H50	Diesel engine oil pressure signal light	3-g-18
P8	Engine temperature display	3-g-18
S35	Engine speed adjustment switch	4-h-17
Z41	Actual value switch Road travel engine speed reduction	7-i-18

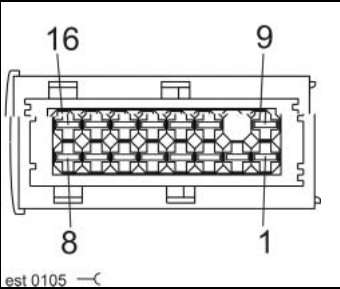
Description of function:

Diesel engine
speed adjustment

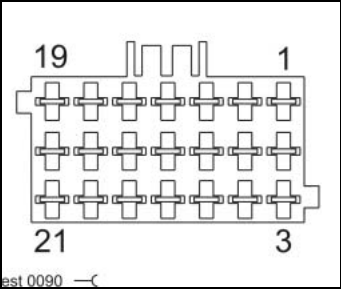
After actuating the engine speed adjustment switch S35, earth is applied at the engine adaptation module A 17 both at pin 2/10 and at pin 2/6 when switch Z 41 is closed. The engine is running at rated speed.
With 3rd gear engaged, transmission switch Z 41 is open, earth is now applied only at pin 2/6. The engine is running at reduced speed (road travel).

Connector pin assignment:

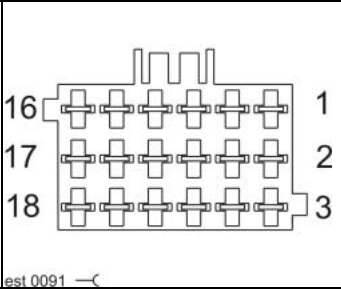
Socket A15



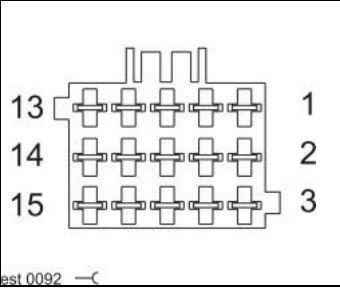
Socket A17 - 1



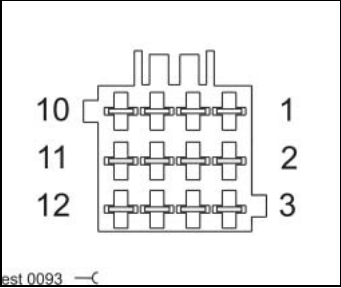
Socket A17 - 2



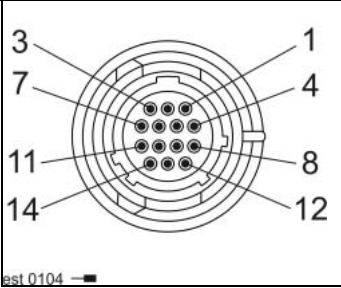
Socket A17 - 3



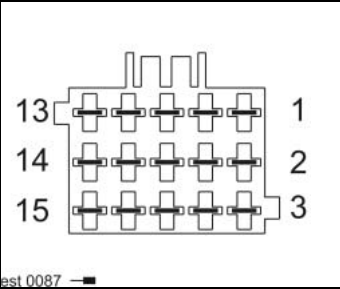
Socket A17 - 4



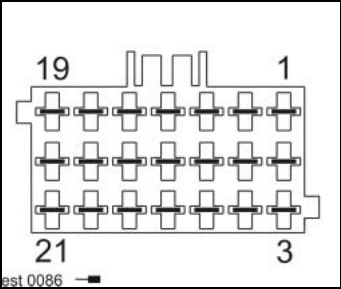
Socket DM



Connector KNBge



Connector MOBbr



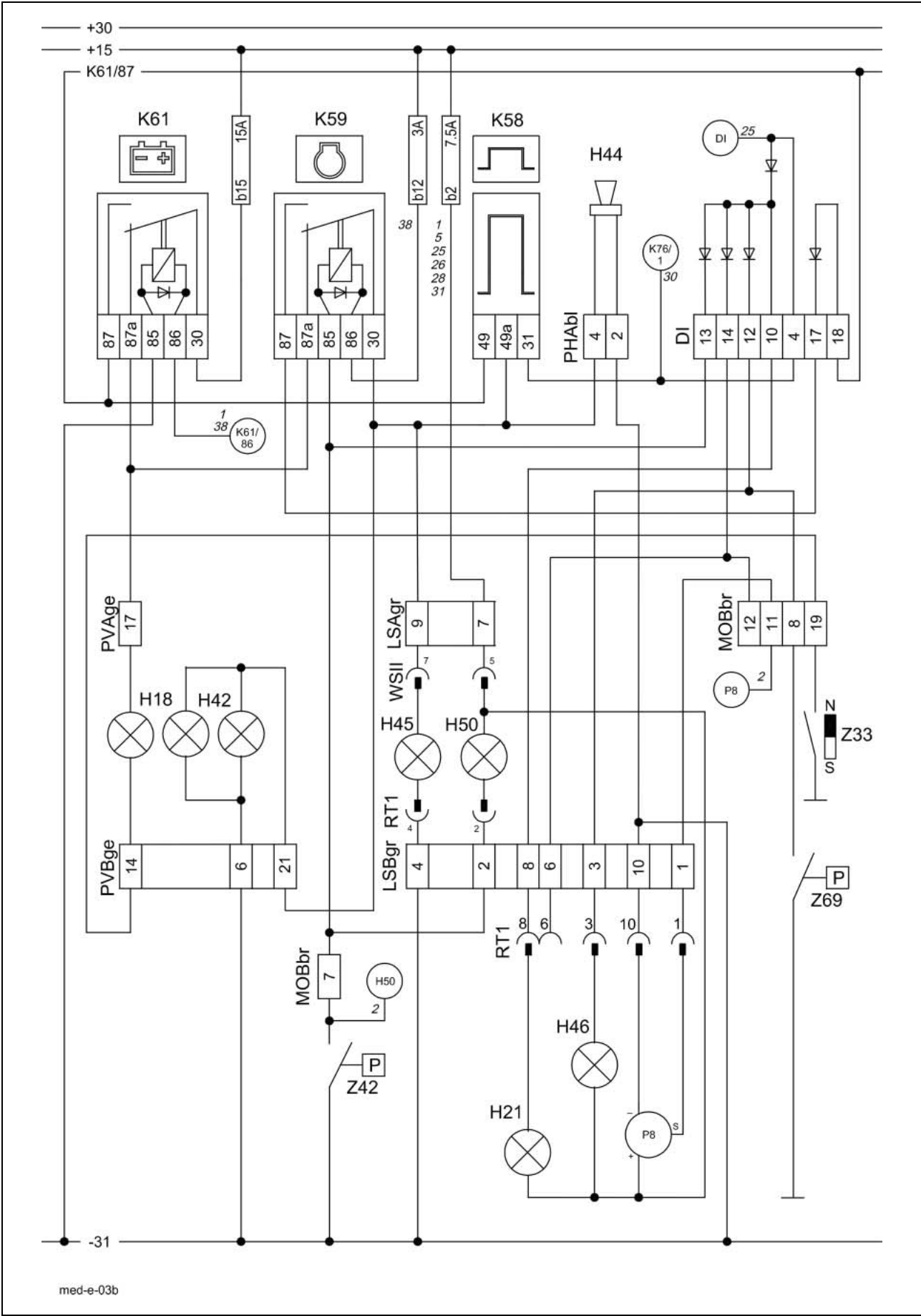
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KNBge - 10	MOB 4					0.75	vi/bk
KNBge - 11	MOB 13					0.75	vi/bk
MOBbr - 3	a14a	HKB21				1.5	bk/pi
MOBbr - 4	KNB 10					1.5	gn/bk
MOBbr - 13	KNB 11					1	bk/bl

3a

Diesel engine cut-off system

3a Diesel engine cut-off system



Key to diagram:

		Coordinates
DI	Diode PCB	4-g-17
H18	Cooling water level signal light	3-g-18
H21	Diesel engine STOP signal light	3-g-18
H42	STOP signal light	3-g-18
H44	Buzzer	
H45	Warning light	3-g-18
H46	Air filter maintenance signal light	3-g-18
H50	Diesel engine oil pressure signal light	3-g-18
K58	Transducer	4-g-17
K59	Engine oil pressure relay	4-g-17
K61	Generator release relay	4-g-17
P8	Engine temperature display	3-g-18
Z33	Coolant level actual value switch	3-j-19
Z42	Diesel engine oil pressure actual value switch	4-j-17
Z69	Air filter maintenance actual value switch	3-j-17

Measured value table:

Item	Component	Measured value	Remark
K59	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
K61	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Z69	Pressure switch	- 50±5 mbar	

Description of function:

Engine oil pressure warning

If the engine oil pressure falls during operation (relay K61 actuated), the oil pressure switch Z 42 closes and earth is applied to pin 85 of relay K 59 – the relay switches. The following items are activated **permanently** in this case:

- Buzzer H 44
- Warning lights H 42 in the operations display screen
- Warning light H 45 on the vehicle information unit
- Engine oil pressure warning light H 50 via the diode PCB
- Warning light H 21.

This earth is simultaneously applied as a signal to module A 17.

Important! When the oil pressure is too low, there is no automatic engine cut-off. The oil pressure switch Z 42 only switches the warning instruments. Another oil pressure switch (Daimler/Chrysler component) here provides automatic power reduction.

Temperature display

The temperature sensor (Daimler/Chrysler component) transmits its signal to the electronic engine control module A15. From there, this signal is passed on to the engine adaptation module A 17 via the CAN bus. The engine adaptation module A 17 converts the digital signal into an analogue signal and transmits it to indicator P8.

Important! When the temperature signal exceeds the defined limit value, the electronic engine control module A15 automatically reduces the engine power. Therefore there will be **no** warning if excess temperatures occur.

Air filter warning

In case of excessive air filter clogging, switch Z 69 closes. In this case, warning lights H 46 and warning light H 21 via the diode PCB are activated **permanently**.

At the same time, the following items are activated **in a pulsed way** via pulse relay K 58:

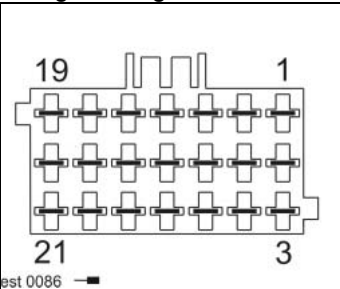
- Buzzer H 44
- Warning lights H 42 in the operations display screen
- Warning light H 45 on the vehicle information unit.

Coolant level warning

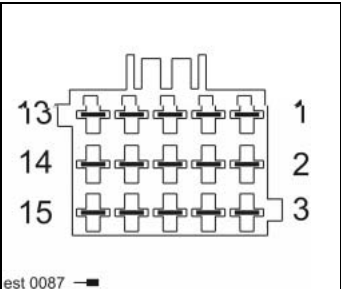
Ignition ON, diesel engine is not started (relay K 61 is not actuated). In case the coolant level is too low, switch Z 33 closes. In this case, warning light H 18 lights up **permanently**.

Connector pin assignment:

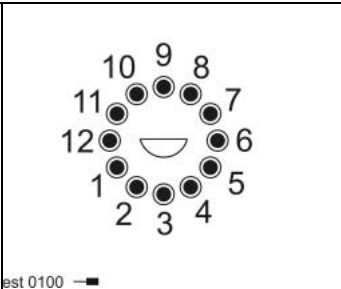
Connector
LSBgr, MOBbr, PHAbl,
PVAge, PVBge



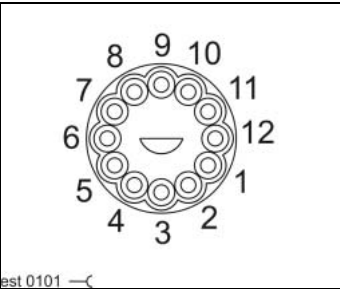
Connector LSAgr



Connector
RT 1, WS II



Socket
RT 1, WS II



Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSAgr - 7	b2a					1.5	bk
LSAgr - 9	PHA 4	PVB 21	K58/49a	K59/30		0.75	bk/br
LSBgr - 1	MOB 11					0.75	wh/rd
LSBgr - 2	K59/85	DI 13	MOB 7			0.5	gn/gr
LSBgr - 3	DI 12	MOB 8				0.75	bl/ye
LSBgr - 4	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	FSA 5	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	LSA 1	HDA 8	MOB 2	FSA 1		
	APA 8	MOA 2	HKA 19	PHA 2	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA5		
	KBA9	KBA10	K54/85	ZGA 3	ZGA 4		
	K49/85	K50/85	K73/31	KBB 12	BFA 2		
LSBgr - 6	DI 14	MOB 12				0.75	ye/bl
LSBgr - 8	DI 10					0.5	bl/br
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 4	FSA 5	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	LSA 1	HDA 8	MOB 2	FSA 1		
	APA 8	MOA 2	HKA 19	PHA 2	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA5		
	KBA9	KBA10	K54/85	ZGA 3	ZGA 4		
	K49/85	K50/85	K73/31	KBB 12	BFA 2		
MOBbr - 7	LSB 2	K59/85	DI 13			1	gn
MOBbr - 8	LSB 3	DI 12				1	bl/ye
MOBbr - 11	LSB 1					1	wh/rd
MOBbr - 12	LSB 6	DI 14				1	bl/wh
MOBbr - 19	PVB 14					1	ye/br
PHAbI - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 4	FSA 5	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	LSA 1	HDA 8	MOB 2	FSA 1		
	APA 8	MOA 2	HKA 19	LSB 10	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA5		
	KBA9	KBA10	K54/85	ZGA 3	ZGA 4		
	K49/85	K50/85	K73/31	KBB 12	BFA 2		
PHAbI - 4	PVB 21	LSA 9	K58/49a	K59/30		0.75	bk/br

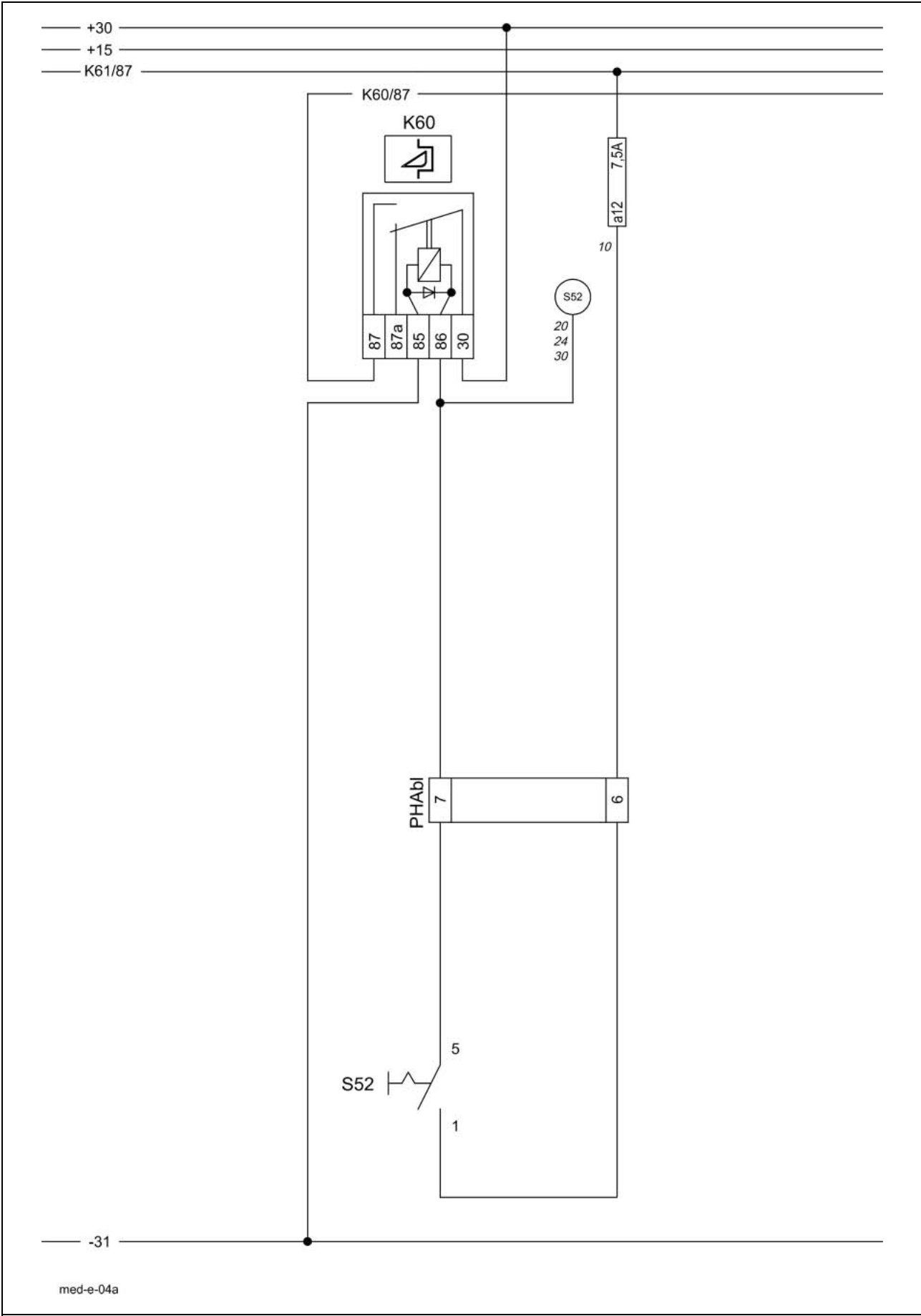
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PVAge -17	K59/87a	K61/87a				0.5	bk/bl
PVBge - 6	EARTH	PVA 21	PHA 2	MFA 1	MFA 2	0.75	br
	LSB 4	FSA 5	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	LSA 1	HDA 8	MOB 2	FSA 1		
	APA 8	MOA 2	HKA 19	LSB 10	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA5		
	KBA9	KBA10	K54/85	ZGA 3	ZGA 4		
	K49/85	K50/85	K73/31	KBB 12	BFA 2		
	EARTH	PVA 21	PVB 6	MFA 1	MFA 2		
PVBge - 14	MOB 19					0.5	ye/br
PVBge - 21	PHA 4	LSA 9	K58/49a	K59/30		0.75	bk/br
RT1 - 1						0.75	wh/rd
RT1 - 2						0.5	gn/gr
RT1 - 3						0.75	bl/ye
RT1 - 4						1.5	br
RT1 - 6						0.75	ye/bl
RT1 - 8						0.5	bl/br
RT1 -10						1.5	br
WSII - 5						1.5	bk
WSII - 7						0.75	bk/br

4a

Activation of road travel

4a Activation of road travel



Key to diagram:

		Coordinates
K60	Road travel release relay	4-g-17
S52	Road travel switch (red)	4-h-17

Measured value table:

Item	Component	Measured value	Remark
K60	Remote control relay	85±7 Ω	(Pin 85 - Pin 86)
		20 A	(Pin 30 - Pin 87a)
		40 A	(Pin 30 - Pin 87)

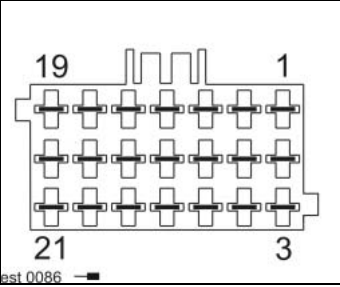
Description of function:

Release of road travel

After actuating the Road travel switch S 52, the voltage applied at branch K 61/87 is passed on via relay K 60. The new branch K60/87 thus created supplies most of the electro-hydraulic circuits.

Connector pin assignment:

Connector PHAbI



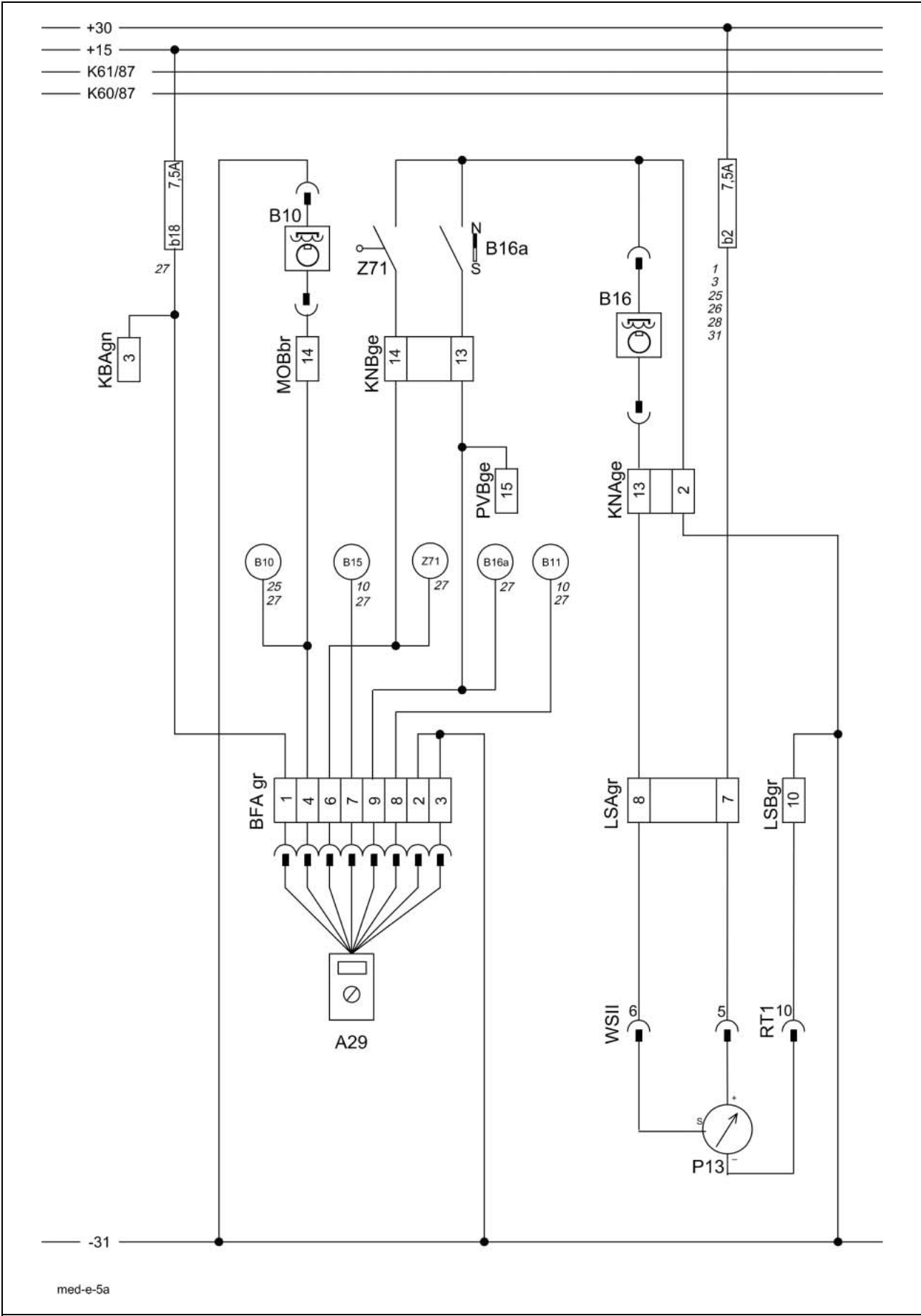
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm²	Colour
PHAbI - 6	a12a					1.5	bk
PHAbI - 7	HDA 12	PVC 9	K60/86	CAC 1	KNB 2	1.5	bl/gn
	K56/86						

5a

Fieldwork computer

5a Fieldwork computer



Key to diagram:

		Coordinates
A29	Fieldwork computer terminal.....	3-f-17
B10	Diesel engine speed sensor.....	5-i-20
B11	Threshing drum speed sensor	6-i-19
B15	Fan speed sensor	7-l-16
B16	Transmission speed sensor (ground speed)	7-i-18
B16a	Transmission speed sensor (ground speed)	7-i-16
P13	Ground speed display	4-g-17
Z71	Front attachment working position actual value switch	5-g-17

Measured value table:

Item	Component	Measured value	Remark
B10	Sensor	1000-1200 Ω	inductive
B11			
B15			
B16			
B16a	Sensor	I - 0	Reed contact

Description of function:

Performance data (area counter)

The signals from the front attachment working position actual value switch Z71 and from the transmission speed sensor B16a are read into the fieldwork computer terminal A16. According to the programming, the terminal processes these values to obtain performance data which can be read out.

(see Fieldwork Computer Operating Manual)

Extended machine monitoring

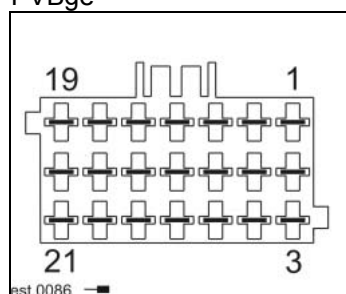
The signals of sensors B10, B11 and B15 are detected by the fieldwork computer terminal A16 and processed there.

For extended machine monitoring, corresponding alarm messages are allocated to the programmed limit values.

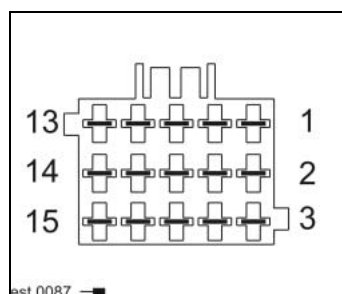
(see Fieldwork Computer Operating Manual)

Connector pin assignment:

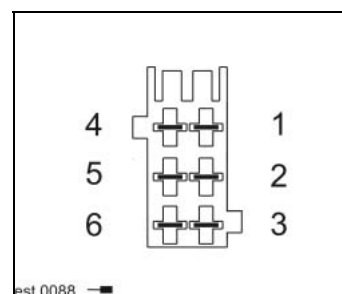
Connector
KBAgn, KNAge, LSBgr,
PVBge



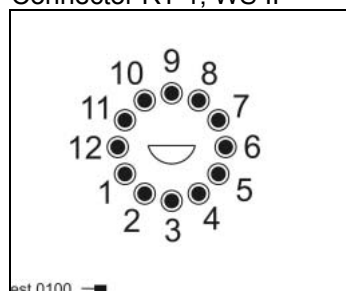
Connector
BFAgr, KNBge, LSAgr



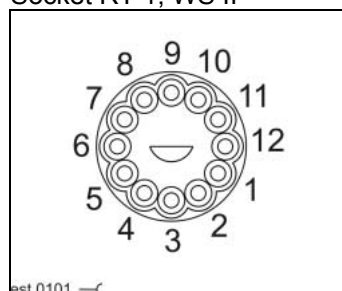
Connector
MOAbr



Connector RT 1, WS II



Socket RT 1, WS II

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm²	Colour
KNAge - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KNAge - 13	LSA 8					0.75	bk/wh
KNBge - 13	PVB 15	BFA 9				0.75	rd/bk
KNBge - 14						0.75	rd/bl
LSAgr - 7	b2a					1.5	bk
LSAgr - 8	KNA 13					0.5	gn/ye

Interconnection list:

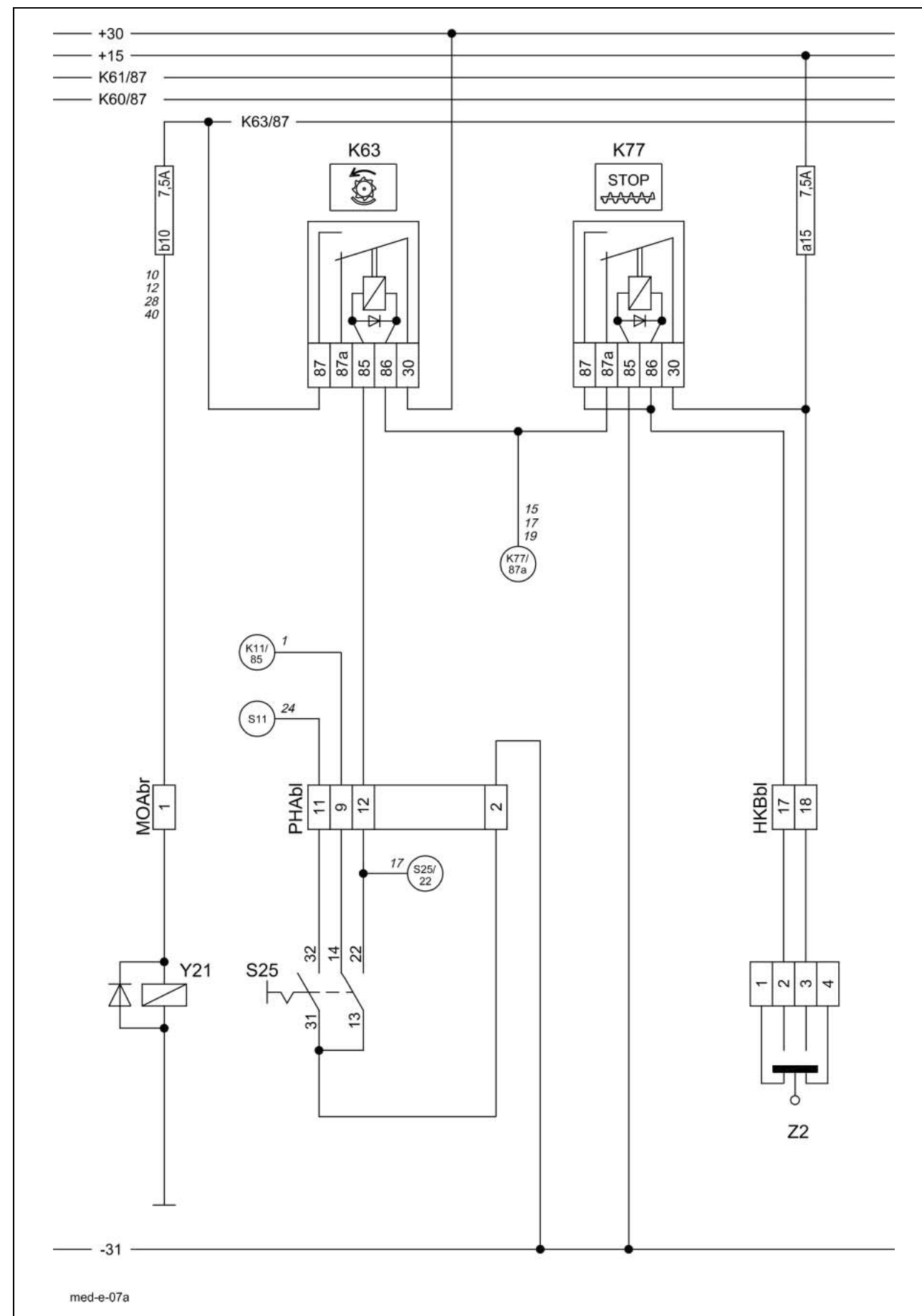
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
MOBbr - 14	DZW 5	BFA 4				1	rd/ye
PVBge - 15	KNB 13					0.5	rd
RT 1 - 10						1.5	br
WS II - 5						1.5	bk
WS II - 6						0.5	gn/ye

7a

Threshing mechanism circuit

- up to serial no. 835 00146
845 00123

7a Threshing mechanism circuit
up to serial no. 835 00146, 845 00123



Key to diagram:

		Coordinates
K63	Threshing mechanism relay	4-g-17
K77	Safety shutdown switch relay	4-g-17
S25	Main drive switch (threshing mechanism clutch)	3-h-17
Y21	Threshing mechanism clutch solenoid coil	5-j-19
Z2	Safety shutdown switch actual value switch	4-q-16

Measured value table:

Item	Component	Measured value	Remark
K63 K77	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y21	Solenoid coil	0.75 A / 16 Ω	

Description of function:

Threshing mechanism
circuit

Relay K61 must be actuated by generator G2 and relay K 60 must be actuated by unlocking the road travel switch S52 as pre-conditions for the threshing mechanism drive. The threshing mechanism clutch solenoid coil Y21 is supplied with power via the threshing mechanism relay K63 after actuating switch S25.

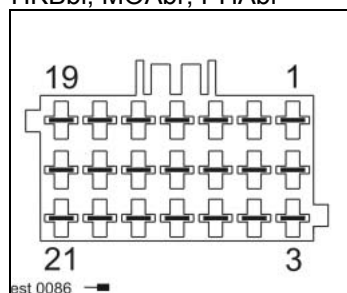
Important! The threshing mechanism relay K63 switches only as a function of the safety shutdown switch relay K77!

Safety shutdown switch
circuit

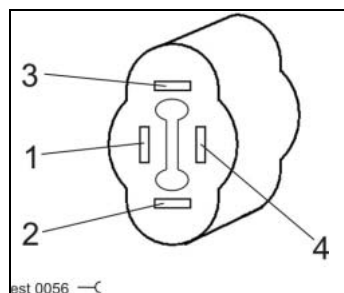
The safety shutdown switch Z2 is located at the right-hand rear machine ladder to the top straw walker housing. When this switch is actuated, relay K77 is switched and cuts the power supply to the threshing mechanism relay K63, pin 86. In this case, the threshing mechanism and all dependent downstream circuits are shut down.

Connector pin assignment:

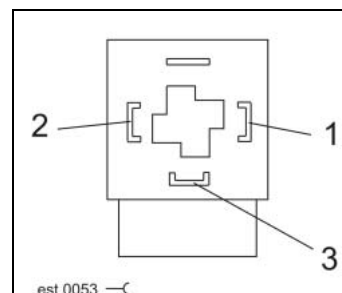
Connector
HKBbl, MOAbr, PHAbI



Socket Z2



Socket Y21

**Interconnection list:**

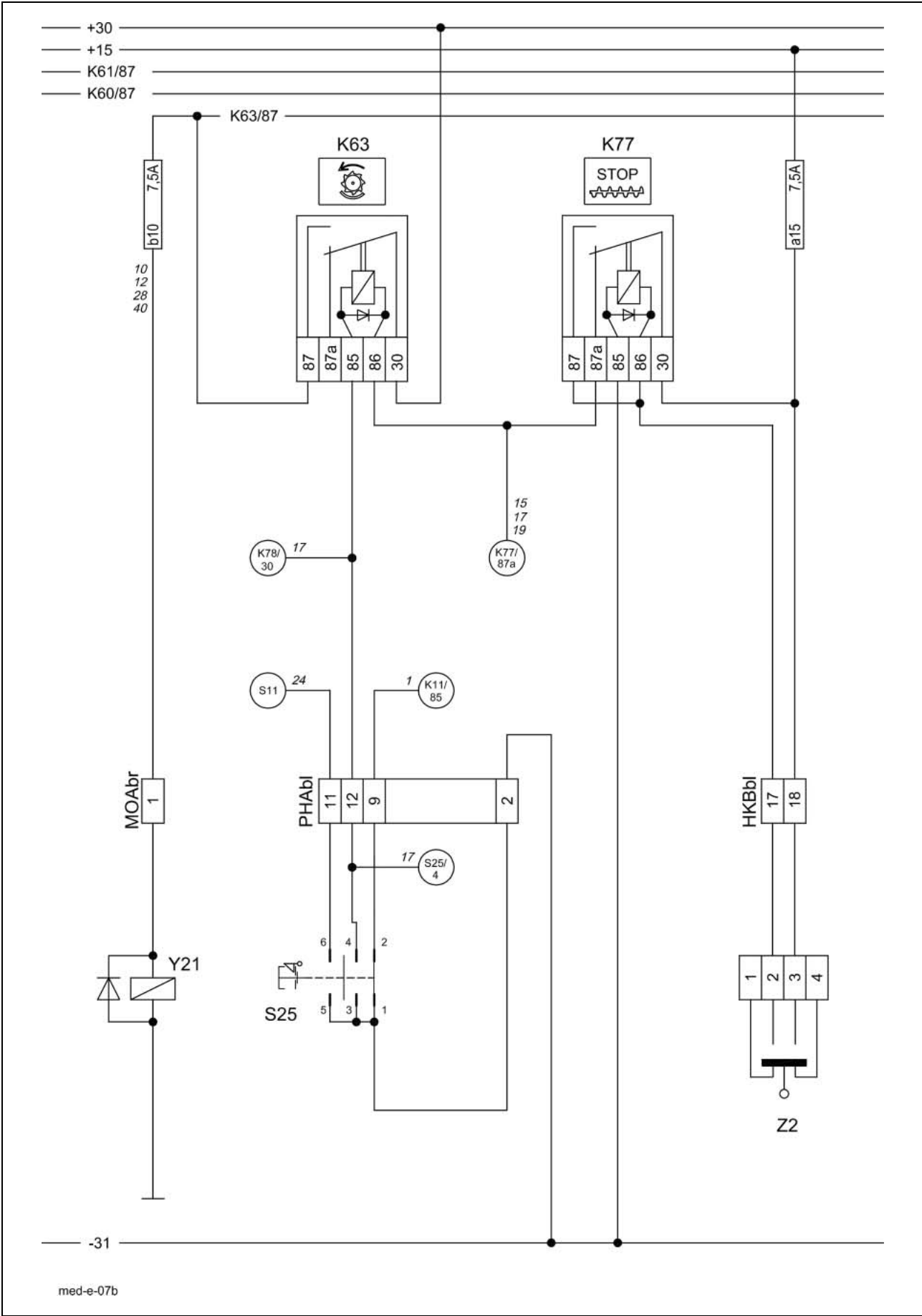
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 17	K77/86	K77/87				0.75	bk/vi
HKBbl - 18	K77/30	a15a				0.75	bk/vi
MOAbr - 1	PHA 15	PVA 1	b10a	K71/86	K72/86	1	bk/gr
PHAbI - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PHAbI - 9	MOB 5					0.75	bl/gn
PHAbI - 11						1.5	bk/ye
PHAbI - 12	K63/85	K78/30				1.5	gn/wh

7b

Threshing mechanism circuit

- from serial no. 835 00147
845 00124

7b Threshing mechanism circuit
from serial no. 835 00147, 845 00124



Key to diagram:

Coordinates

K63

Threshing mechanism relay

4-g-17

K77

Safety shutdown switch relay

4-g-17

S25

Main drive switch (threshing mechanism clutch).....

3-h-17

Y21

Threshing mechanism clutch solenoid coil.....

5-j-19

Z2

Safety shutdown switch actual value switch

4-q-16

Measured value table:

Item	Component	Measured value	Remark
K63	Remote control relay	95±10 Ω	(Pin 85 - pin 86)
K77		15 A	(Pin 30 - pin 87a)
		30 A	(Pin 30 - pin 87)
Y21	Solenoid coil	0.75 A / 16 Ω	

Description of function:

Threshing mechanism circuit

Relay K61 must be actuated by alternator G2 and relay K 60 must be actuated by unlocking the road travel switch S52 as pre-conditions for the threshing mechanism drive. The threshing mechanism clutch solenoid coil Y21 is supplied with power via the threshing mechanism relay K63 after actuating switch S25.

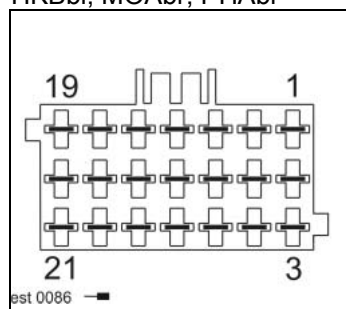
Important! The threshing mechanism relay K63 switches only as a function of the safety shutdown switch relay K77!

Safety shutdown switch

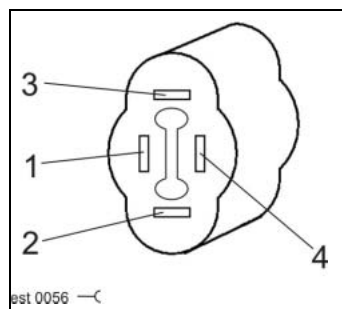
The safety shutdown switch Z2 is located at the right-hand rear machine ladder to the top straw walker housing. When this switch is actuated, relay K77 is switched and cuts the power supply to the threshing mechanism relay K63, pin 86. In this case, the threshing mechanism and all dependent downstream circuits are shut down.

Connector pin assignment:

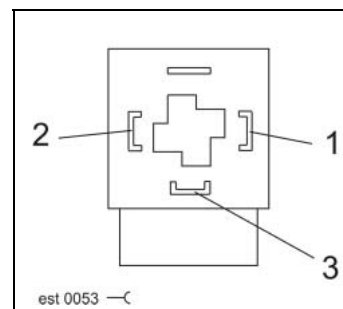
Connector
HKBbl, MOAbr, PHAbl



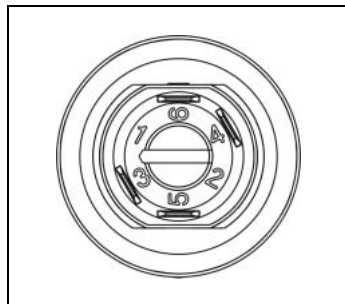
Socket Z2



Socket Y21



S25

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 17	K77/86	K77/87				0.75	bk/vi
HKBbl - 18	K77/30	a15a				0.75	bk/vi
MOAbr - 1	PHA 15	PVA 1	b10a	K71/86	K72/86	1	bk/gr
PHAbl - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PHAbl - 9	MOB 5					0.75	bl/gn
PHAbl - 11						1.5	bk/ye
PHAbl - 12	K63/85	K78/30				1.5	gn/wh

10a

Fan variable-speed drive

The schematic diagram illustrates the electrical control system for a medical device, labeled 'med-e-10a'. The system is powered by a three-phase supply with lines labeled +30, +15, K61/87, K60/87, and K63/87. The main power distribution is handled by two relays, K71 and K72, which are controlled by the +30 and +15 lines. These relays are connected to a terminal block with terminals 87, 87a, 85, 86, and 30. The system includes a motor M3, which is controlled by a switch S18 and a relay K71. The motor is connected to a terminal block with terminals 18, 17, and 20. The lighting system consists of two indicator lights, H48 and H49, which are controlled by a switch S65 and a relay K72. The system also includes two pressure sensors, P1 and P3, which are connected to a terminal block with terminals 19, 21, 12, 13, 16, and 15. The pressure sensors are connected to a terminal block with terminals 18, 17, and 20. The system also includes two actuators, B11 and B15, which are connected to a terminal block with terminals 1, 12, and 1. The actuators are connected to a terminal block with terminals 18, 17, and 20. The system is grounded to a common ground labeled -31.

Coordinates

B11	Threshing drum sensor	6-i-19
B15	Fan sensor	7-l-16
E35	Instrument lighting.....	4-g-17
H48	Threshing drum signal light.....	4-g-17
H49	Fan signal light.....	4-g-17
K71	Fan speed relay	4-g-17
K72	Fan speed relay	4-g-17
M3	Fan speed adjustment motor	5-l-19
P1	Hour meter indicator	4-g-17
P3	Speed indicator	4-g-17
S18	Fan speed adjustment switch	4-g-17
S65	Threshing drum / fan speed changeover switch.....	4-g-17

Item	Component	Measured value	Remark
B11 B15	Sensor	1000 - 1200 Ω	inductive
K71 K72	Remote control relay	85 \pm 7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
M3	Engine	12 - 15 A 2 - 4 A	Short-circuit current Working current

Description of function:

Fan speed adjustment circuit

The fan speed adjustment electric motor M3 rotates clockwise or counterclockwise by means of switch S18 and relay K71 or K72. Adjustments are only allowed while the fan is running.

Important! The power supply of relays K71 and K72 depends on the threshing mechanism relay K63 (see corresponding section). Adjustments of the fan speed are possible only when switch S65 (Threshing drum / fan speed changeover) is set to "Fan".

Threshing drum speed indicator

If the threshing drum speed is to be displayed, switch S65 (Threshing drum / fan speed changeover) must be set to "Threshing drum". In this case, the threshing drum symbol (H48) is lighted and the corresponding signals from the threshing drum speed sensor are processed in indicator P3.

Fan speed indicator

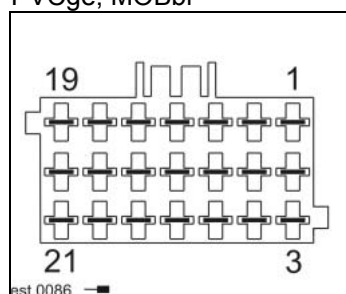
If the fan speed is to be displayed, switch S65 (Threshing drum / fan speed changeover) must be set to "Fan". In this case, the fan symbol (H49) is lighted and the corresponding signals from the fan speed sensor are processed in indicator P3.

Hour meter indicator

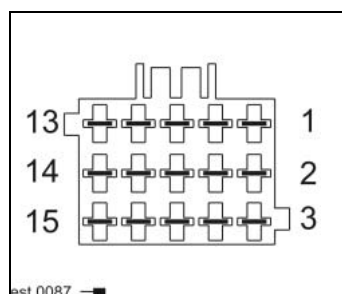
When voltage from the branch K61/87 (generator) is applied at the hour meter P1, the hours worked are displayed.

Connector pin assignment:

Connector
HKAbI, KNAge, PVAge,
PVCge, MOBbr



Connector KNBge

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKAbI - 17	K72/30					2.5	wh/ye
HKAbI - 18	K71/30					2.5	wh/bk
HKAbI - 19	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
HKAbI - 20	PVA 16	BFA 8				0.75	bl/wh
KNAge - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KNBge - 12	PVA 15	MOB 1	BFA 7			0.75	bk/vi

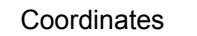
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PVAge - 12	K71/85					0.75	vi/gr
PVAge - 13	K72/85					0.75	vi/bl
PVAge - 15	MOB 1	KNB 12	BFA 7			0.75	bk/vi
PVAge - 16	HKA 20	BFA 8				0.75	bl/wh
PVAge - 21	EARTH	KNAge - 2				1.5	br
PVCge - 6	DZW 8	b13a	DI 11			0.5	wh/ye
PVAge - 21	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PVCge - 6	DZW 8	b13a	DI 11			0.5	wh/ye

12a

**Deflector adjustment,
performance monitor**

Key to diagram:



A26	Deflector adjustment module	5-h-16
B31	Sensor	
	Cleaning performance monitor	6-q-18
B32	Sensor	
	Residual separation performance monitor.....	4-s-18
K63	Threshing mechanism relay.....	4-g-17
K86	Deflector adjustment relay	5-h-16
M22	Deflector adjustment motor.....	6-u-17
P 4	Indicator	
	Separation performance monitor	4-g-17
P 5	Indicator	
	Cleaning performance monitor	4-g-17
R 6	Potentiometer	
	Cleaning performance monitor sensitivity.....	4-g-17
R 7	Potentiometer	
	Residual separation performance monitor sensitivity	4-g-17
R28	Potentiometer	
	Spreading direction potentiometer (actual value).....	6-u-17
R29	Potentiometer	
	Spreading direction potentiometer (set value).....	4-g-17

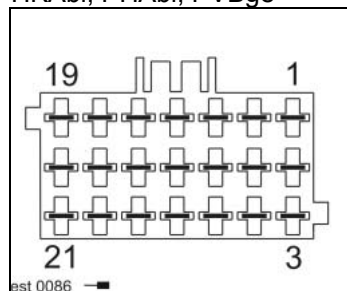
Item	Component	Measured value	Remark
K86	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
M22	Engine	5.5 A 0.7 A	Short-circuit current Working current
R 6 R 7	Potentiometer	0 - 11 kΩ	
R28	Potentiometer	0.2-5.0 kΩ 0.15-4.85 V	Coil Signal
R29	Potentiometer	4.70 kΩ 1.7-6.4 kΩ	(Pin A-E) coil (Pin S-E) slider

Description of function:

Deflector adjustment	The deflector adjustment module (A26) is supplied with power via relay K86 when the threshing mechanism is engaged. According to the setting of the set value potentiometer (R29) in the cab, the deflector adjustment module (A26) controls the deflector adjustment motor (M22) until the set value matches that of the integrated actual value potentiometer (R28).
Performance monitor	Depending on the crop to be harvested, the performance monitor sensors allow a rough sensitivity adjustment (coarse/medium/fine). The indicator may be fine-adjusted at the potentiometers R6 / R7.

**Connector pin
assignment:**

Connector
HKAbI, PHAbI, PVBge



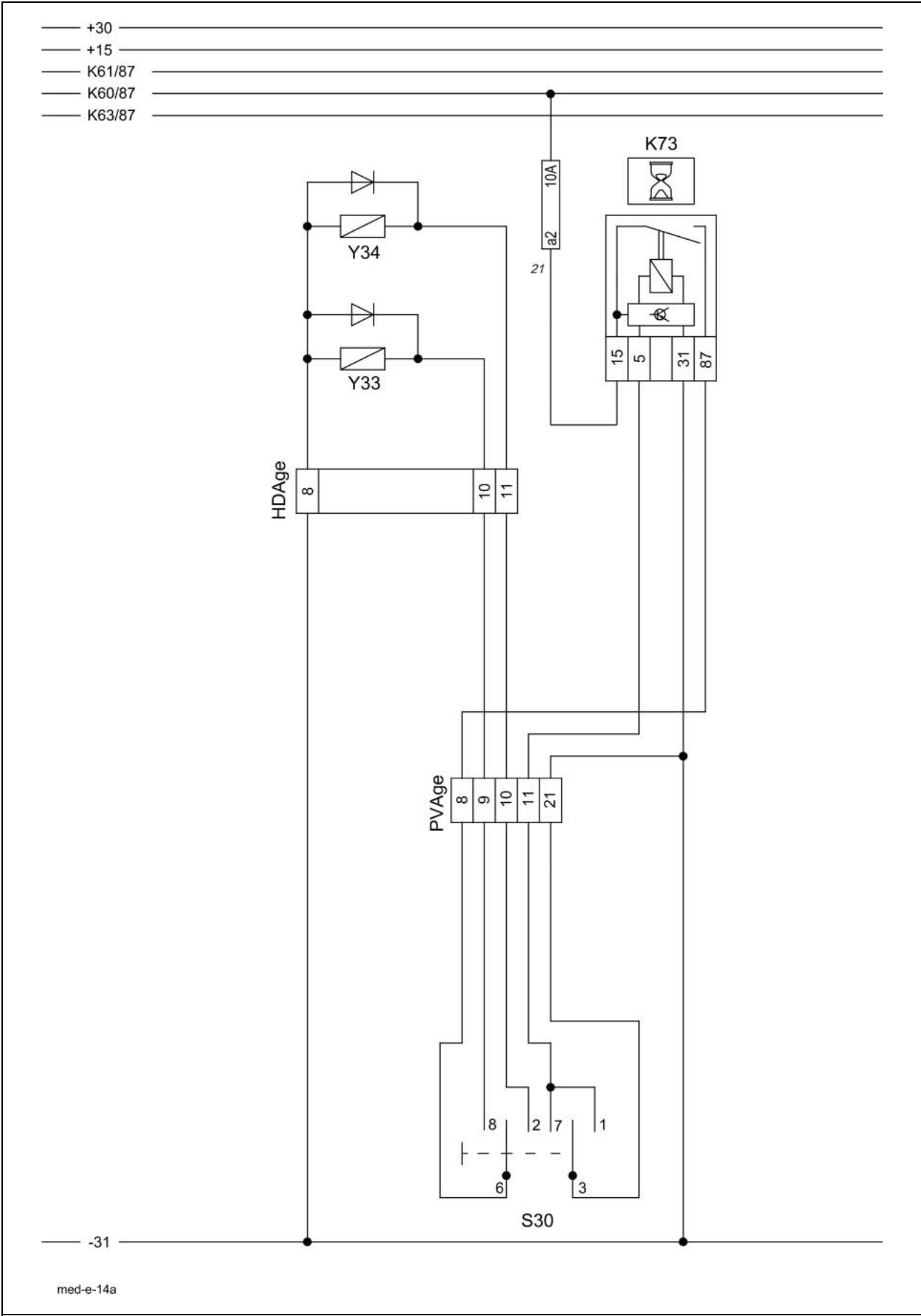
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKAbl - 12	PVB 16					0.75	vi/gn
HKAbl - 13	PVB 17					0.75	vi/wh
M22 - 1						6.0	ye
M22 - 2						6.0	wh
M22 - 3						1.0	bk/gn
M22 - 4						1.0	bl
M22 - 5						1.0	br/ye
P4 - 1						0.25	br
P4 - 2						0.25	gn
P4 - 3						0.25	wh
P5 - 1						0.35	bk
P5 - 2						0.35	gn
P5 - 5						0.35	wh
P5 - 6						0.5	br
PHAbI - 15	PVA 1	b10a	MOA 1	K71/86	K72/86	1.5	bk/gr
PVBge - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PVBge - 7	a9a					0.5	bk
PVBge - 16	HKA 12					0.5	gn
PVBge - 17	HKA 13					0.5	wh
R29 - 1						0.5	bk/gn
R29 - 2						0.5	rd
R29 - 3						0.5	br/ye
R6 / R7 - 1						0.25	br
R6 / R7 - 2						0.25	gn
R6 / R7 - 3						0.25	wh

14a

Swinging the grain tank unloading tube

14a Swinging the grain tank unloading tube



Key to diagram:

		Coordinates
K73	Swing grain tank unloading tube relay.....	4-g-17
S30	Swing grain tank unloading tube switch.....	4-g-17
Y33	Solenoid coil	
Y34	Swinging out the grain tank unloading tube.....	5-h-16
	Solenoid coil	
	Swinging in the grain tank unloading tube	5-h-16

Measured value table:

Item	Component	Measured value	Remark
K73	Time relay	---	Time-controlled OFF after 20 sec.
Y33	Solenoid coil	4.5 A	
Y34		2.7 Ω	

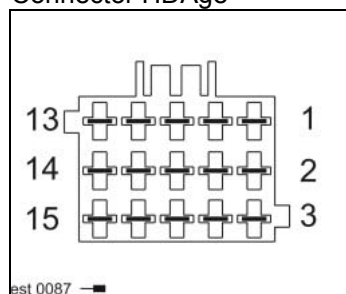
Description of function:

Grain tank unloading tube
swing circuit

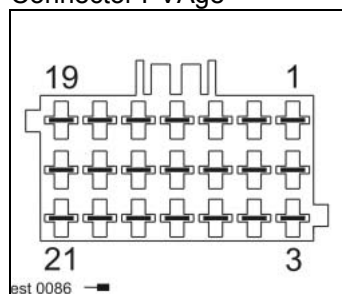
With the road travel circuit unlocked, the time relay K73 is supplied with power. Toggle switch S30 connects earth to one of the two solenoid coils Y33 / Y34 and also connects the start signal for time control in relay K73. During approx. 20 seconds, power supply is now connected to the corresponding solenoid coil Y33 / Y34.
The electronics in relay K73 is designed so that a voltage must be applied first in order to activate the time control before the applied earth is accepted as start signal.

Connector pin assignment:

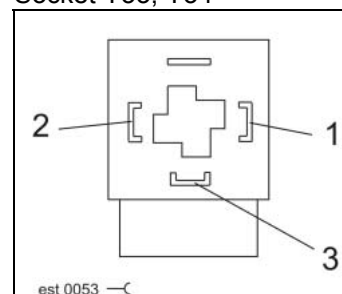
Connector HDAge



Connector PVAge



Socket Y33, Y34

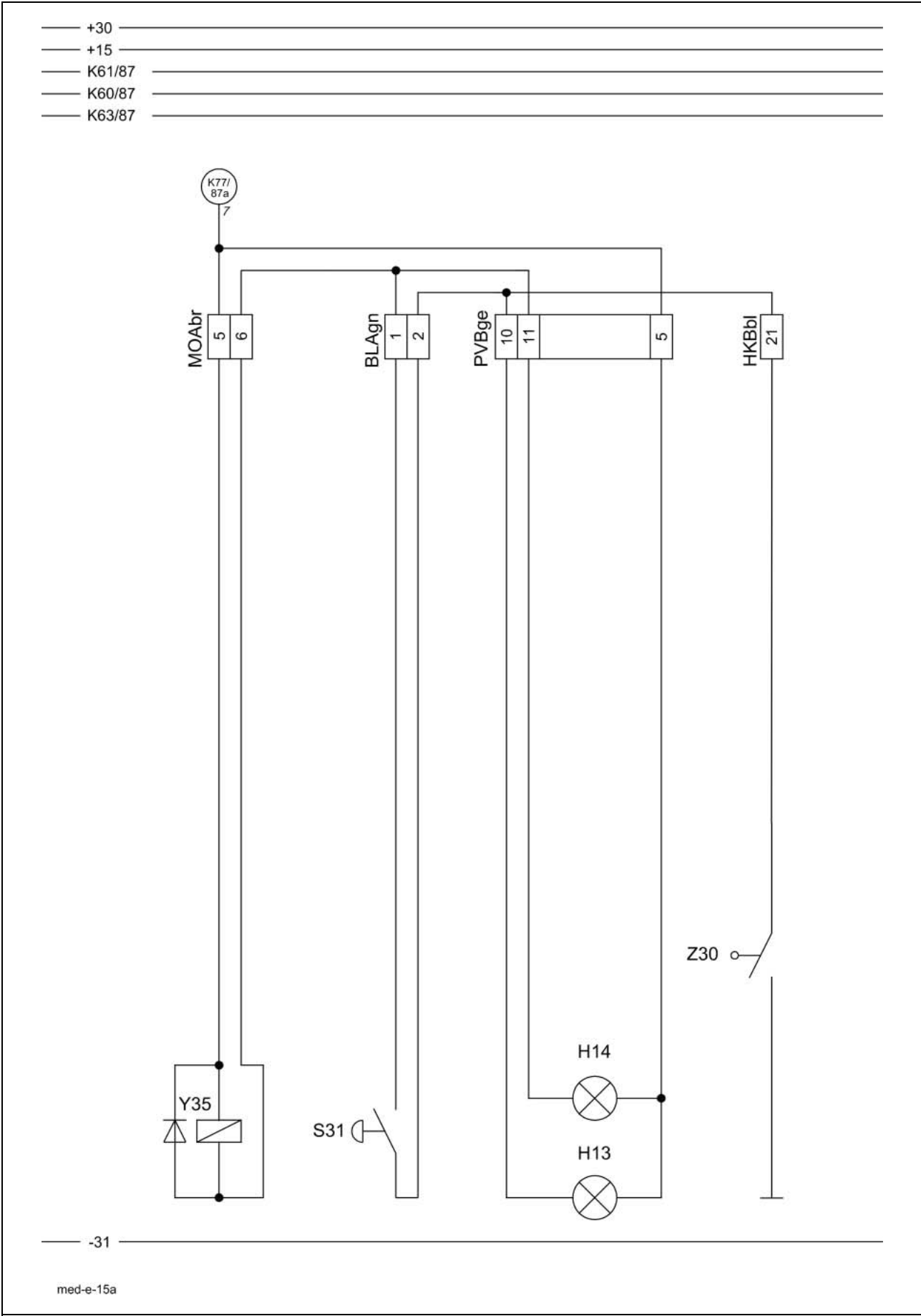
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PVAge - 8	K73/87					1.5	gn
PVAge - 9	HDA 10					1.5	vi/bl
PVAge - 10	HDA 11					1.5	bl/sw
PVAge - 11	K73/S					0.5	bl/gn
PVAge - 21	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA 5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
HDAge - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
HDAge - 10	PVA 9					1.5	vi/bl
HDAge - 11	PVA 10					1.5	bl/wh

15a

Grain tank unloading

15a Grain tank unloading



Key to diagram:

		Coordinates
H13	Unloading tube position signal light	4-g-17
H14	Grain tank unloading signal light.....	4-g-17
K77	Safety shutdown switch relay	4-g-17
S31	Grain tank unloading switch.....	5-g-19
Y35	Grain tank unloading solenoid coil.....	5-j-19
Z30	Grain tank unloading tube swung out actual value switch.....	4-l-20

Measured value table:

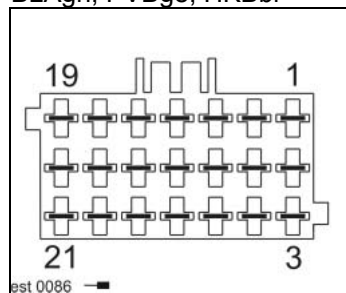
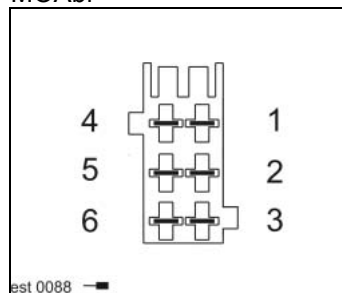
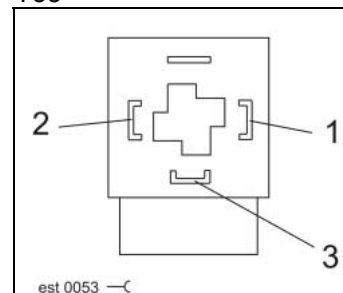
Item	Component	Measured value	Remark
K77	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y35	Solenoid coil	0.75 A 16 Ω	

Description of function:

Grain tank unloading circuit

Grain tank unloading is activated by means of switch S31 by solenoid coil Y35. As a pre-condition, the unloading tube must be swung out and therefore switch Z30 must be closed.

Important! The power supply of solenoid coil Y35 depends on the safety shutdown switch relay K77 (diagram 7).

Connector pin assignment:Connector
BLAgn, PVBge, HKBblConnector
MOAbrSocket
Y35**Interconnection list:**

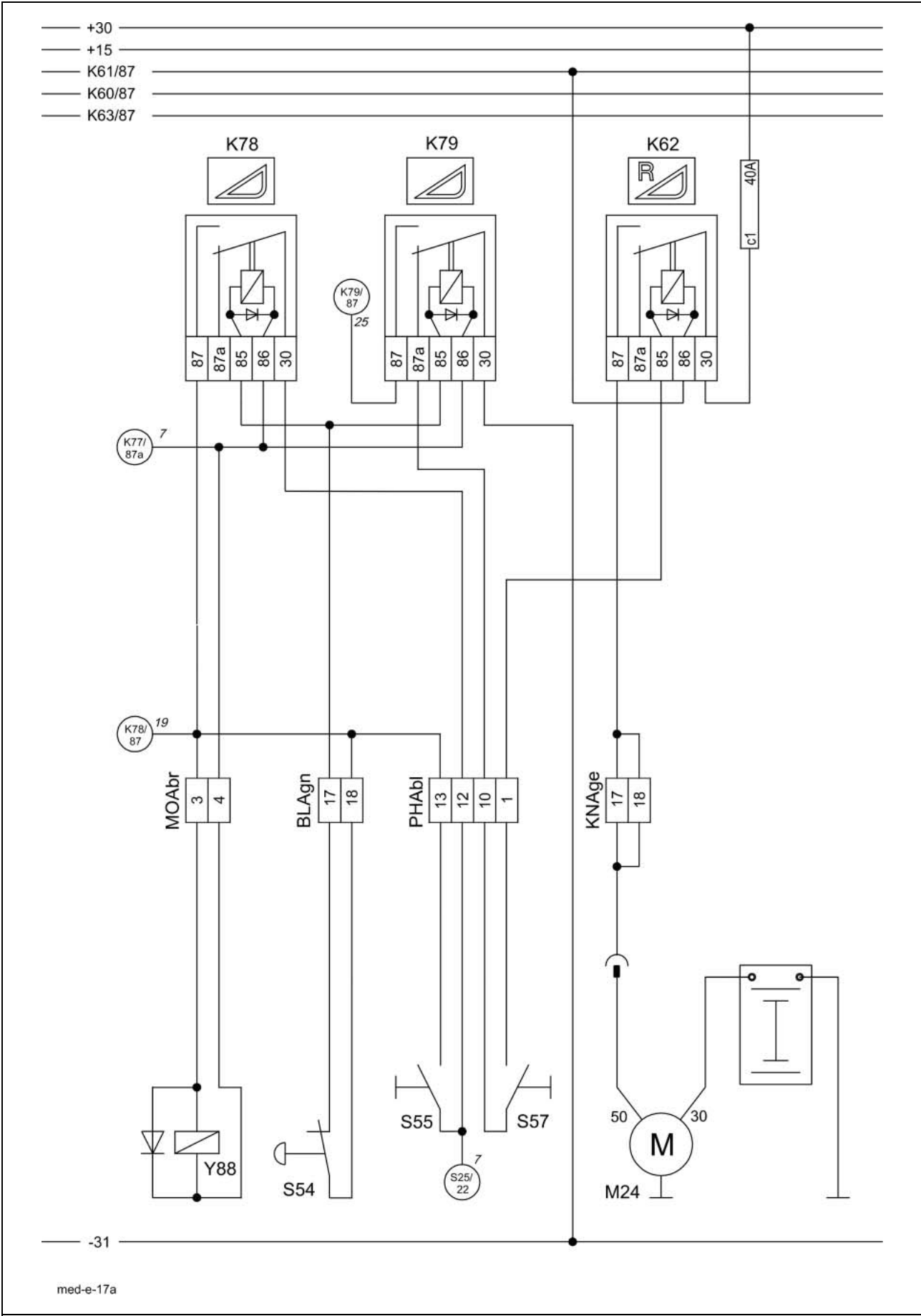
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 1	PVB 11	MOA 6				0.75	bk/or
BLAgn - 2	PVB 10	HKA 21				0.75	gr/vi
HKBbl - 21	a14a	MOB 3				1.5	bk/br
MOAbr - 5	PVB 5	MOA 4	K69/86	K70/86	K77/87a	1	bk
	K63/86	K78/86	K79/86				
MOAbr - 6	PVB 11	BLA 1				1	bk/or
PVBge - 5	MOA 4	MOA 5	K69/86	K70/86	K77/87a	0.75	vi/ye
	K63/86	K78/86	K79/86				
PVBge - 10	HKA 21	BLA 2				0.75	gr/vi
PVBge - 11	MOA 6	BLA 1				0.75	bk/or

17a

Front attachment drive, reverser drive

- with **electric** reverser drive

17a Front attachment drive, reverser drive (electric)



Key to diagram:

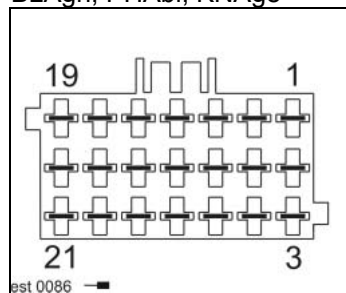
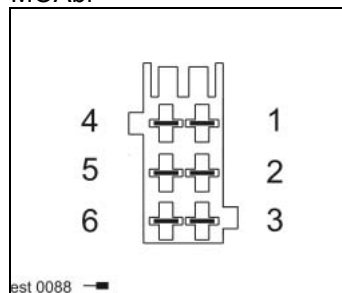
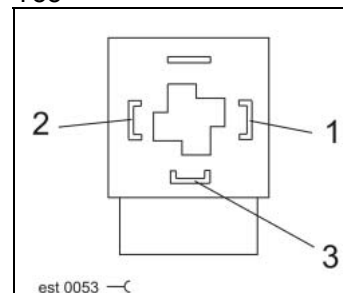
		Coordinates
K62	Front attachment reverse relay	4-g-17
K77	Safety shutdown switch relay	4-g-17
K78	Front attachment identification relay	4-g-17
K79	Front attachment identification relay	4-g-17
M24	Front attachment reverse motor	7-e-17
S25	Main drive switch (threshing mechanism clutch)	4-h-17
S54	Front attachment OFF switch	5-g-19
S55	Front attachment ON switch	4-h-17
S57	Front attachment reverse switch	4-g-17
Y88	Front attachment clutch solenoid coil	5-j-19

Measured value table:

Item	Component	Measured value	Remark
K62	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
K77 K78 K79	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y88	Solenoid coil	0.75 A 16 Ω	

Description of function:

Front attachment circuit	<p>Engaging the front attachment drive requires two pre-conditions, i.e. relay K60 must be actuated by unlocking the road travel switch S52 and the threshing mechanism must be engaged by relay K63.</p> <p>After actuating pushbutton S55, earth is applied to the solenoid coil Y88. As solenoid coil Y88 is supplied with power by relay K77, the front attachment engages.</p> <p>At the same time, earth is connected from S55 via pushbutton S54 to relay K78. K78 therefore remains locked in, so that the front attachment remains engaged even after releasing pushbutton S55.</p> <p>The locking-in is stopped by actuating pushbutton S54 – the front attachment is disengaged.</p> <p>Important! The power supply of solenoid coil Y88 depends on the safety shutdown switch relay K77 (diagram 7).</p>
Reversing safety circuit	<p>When engaging the front attachment, relay K79 is also actuated in parallel and cuts the earth supply to the front attachment reverse pushbutton S57. Reversing therefore is possible only with the front attachment disengaged.</p>
Reversing circuit (electric)	<p>During reversing, the electric motor M24 is switched on by switch S57 via relay K62.</p> <p>Operating time above 10 seconds should be avoided since the electric motor might be overloaded.</p> <p>Important! The earth supply of pushbutton S57 depends on relay K79 – Reversing safety circuit.</p>

Connector pin assignment:Connector
BLAgn, PHAbl, KNAgeConnector
MOAbrSocket
Y88**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 17	K78/85	K79/85				0.75	br/ye
BLAgn - 18	PHA 13	PVB 1	K78/87	MOA 3		0.75	br/ye
KNAge - 17	MOB 18	KNA 18	K62/87	HDA 15		2.5	bk/gn
KNAge - 18	MOB 18	KNA 17	K62/87	HDA 15		2.5	bk/gn
MOAbr - 3	PHA 13	PVB 1	K78/87	BLA 18		1	br/ye
MOAbr - 4	PVB 5	MOA 5	K69/86	K70/86	K77/87a	1	bk/vi
	K63/86	K78/86	K79/86				
PHAbl - 1	K62/85					0.5	br/gn
PHAbl - 10	K79/87a					0.75	br/bl
PHAbl - 12	K63/85	K78/30				1.5	gn/wh
PHAbl - 13	PVB 1	K78/87	BLA 18	MOA 3		1.5	br/ye

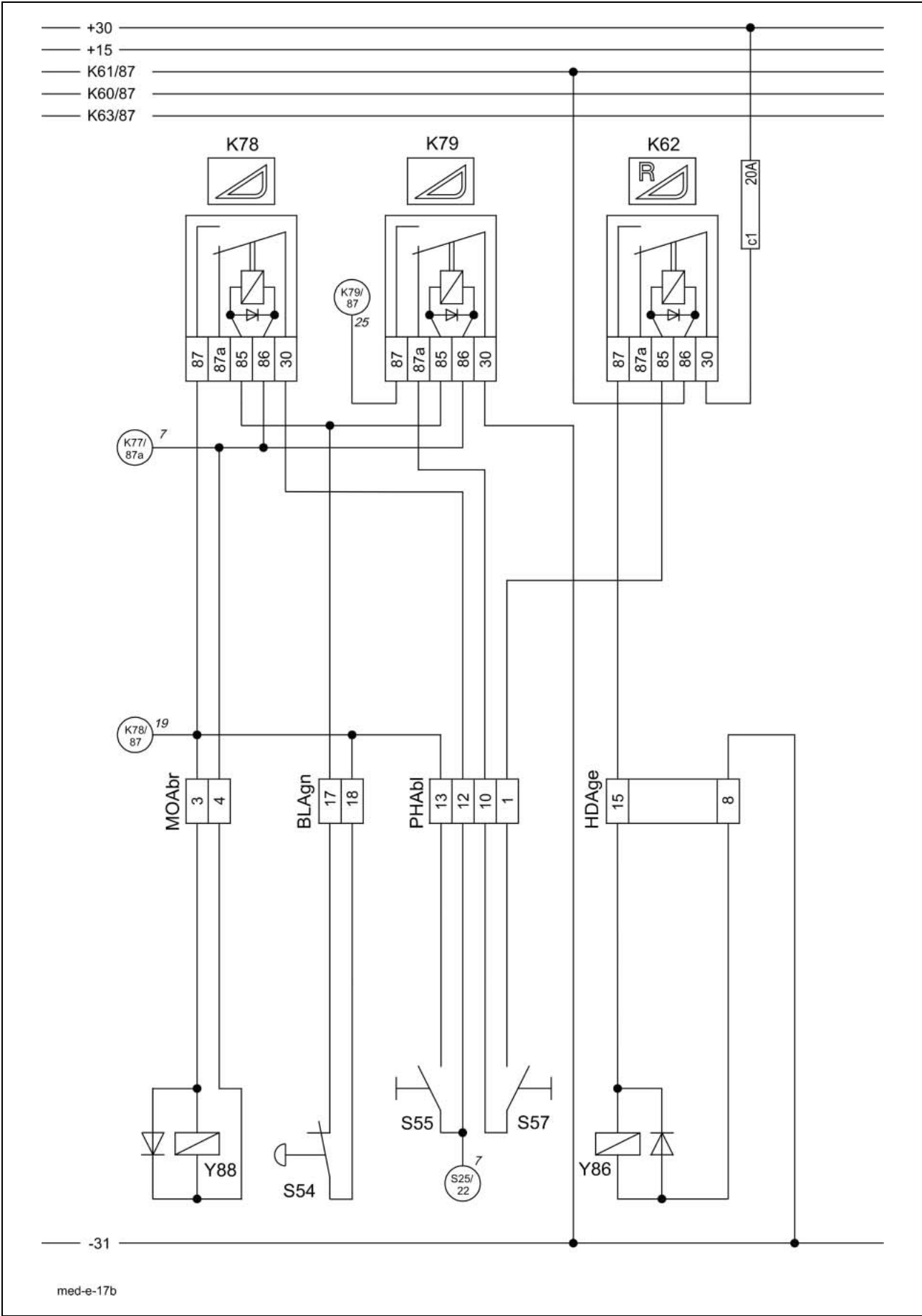
17b

Front attachment drive, reverser drive

- with **hydraulic** reverser drive

- up to serial no. 835 00146
845 00123

17b Front attachment drive, reverser drive (hydraulic)
up to serial no. 835 00146, 845 00123



Key to diagram:

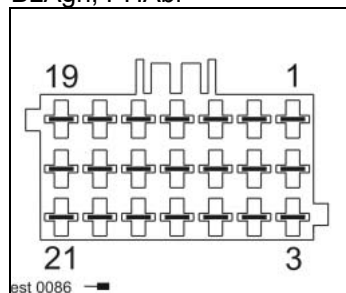
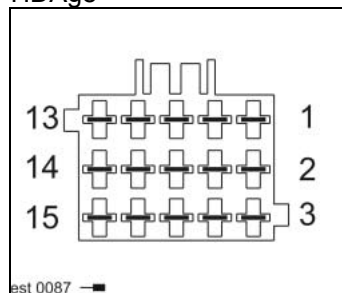
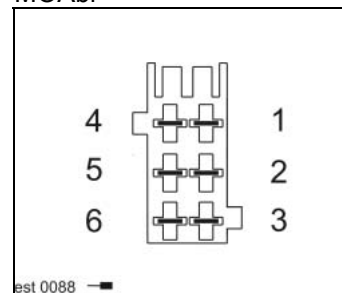
		Coordinates
K62	Front attachment reverse relay.....	4-g-17
K77	Safety shutdown switch relay	4-g-17
K78	Front attachment identification relay.....	4-g-17
K79	Front attachment identification relay.....	4-g-17
S25	Main drive switch (threshing mechanism clutch).....	4-h-17
S54	Front attachment OFF switch	5-g-19
S55	Front attachment ON switch	4-h-17
S57	Front attachment reverse switch	4-g-17
Y86	Reverse front attachment solenoid coil	5-h-16
Y88	Front attachment clutch solenoid coil	5-j-19

Measured value table:

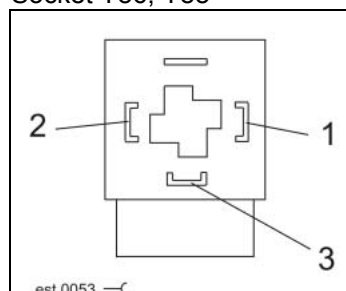
Item	Component	Measured value	Remark
K62	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
K77 K78 K79	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y86	Solenoid coil	4.5 A 2.7 Ω	
Y88	Solenoid coil	0.75 A 16 Ω	

Description of function:

Front attachment circuit	<p>Engaging the front attachment drive requires two pre-conditions, i.e. relay K60 must be actuated by unlocking the road travel switch S52 and the threshing mechanism must be engaged by relay K63.</p> <p>After actuating pushbutton S55, earth is applied to the solenoid coil Y88. As solenoid coil Y88 is supplied with power by relay K77, the front attachment engages.</p> <p>At the same time, earth is connected from S55 via pushbutton S54 to relay K78. K78 therefore remains locked in, so that the front attachment remains engaged even after releasing pushbutton S55.</p> <p>The locking-in is stopped by actuating pushbutton S54 – the front attachment is disengaged.</p> <p>Important! The power supply of solenoid coil Y88 depends on the safety shutdown switch relay K77 (diagram 7).</p>
Reversing safety circuit	<p>When engaging the front attachment, relay K79 is also actuated in parallel and cuts the earth supply to the front attachment reverse pushbutton S57. Reversing therefore is possible only with the front attachment disengaged.</p>
Reversing circuit (hydraulic)	<p>When reversing, the front attachment reverse solenoid coil Y86 is actuated by switch S57 via relay K62.</p> <p>Important! The earth supply of pushbutton S57 depends on relay K79 – Reversing safety circuit.</p>

Connector pin assignment:Connector
BLAgn, PHAblConnector
HDAgeConnector
MOAbr

Socket Y86, Y88

**Interconnection list:**

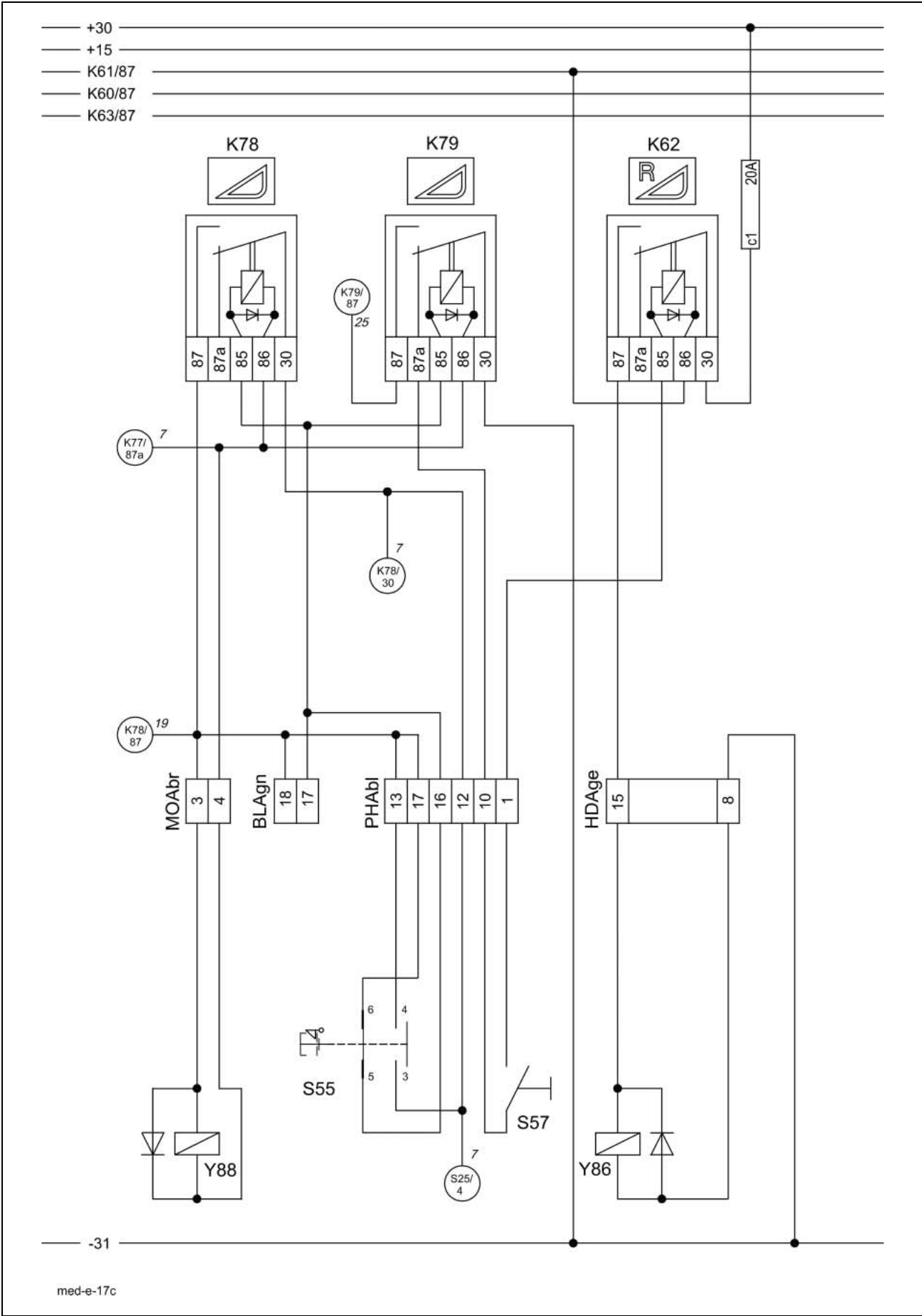
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 17	BLA 17	K78/85	K79/85			0.75	br/ye
BLAgn - 18	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	0.75	br/ye
HDAge - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	PVC 12	CAC 8	CAC 17	FSA 1		
	APA 8	MOA 2	HKA 19	PHA 2	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA5		
	KBA9	KBA10	K54/85	ZGA 3	ZGA 4		
	EARTH	PVA 21	PVB 6	MFA 1	MFA 2		
	LSB 10	LSB 4					
HDAge - 15	MOB 18	KNA 17	KNA 18	K62/87	HDA 15	1.5	bk/gn
MOAbr - 3	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	1.0	br/ye
MOAbr - 4	PVB 5	MOA 4	MOA 5	K69/86	K70/86	1.0	bk/vi
	K63/86	K78/86	K79/86				
PHAbl - 1	PHA 1	K62/85				0.5	br/gn
PHAbl - 10	PHA 10	K79/87a				0.75	br/bl
PHAbl - 12	PHA 12	K63/85	K78/30			1.5	gn/wh
PHAbl - 13	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	1.5	br/ye

17c

Front attachment drive, reverser drive

- with hydraulic reverser drive
- from serial no. 835 00147
845 00124

17c Front attachment drive, Reverser drive (hydraulic)
from serial no. 835 00147, 845 00124



Key to diagram:

		Coordinates
K62	Front attachment reverse relay	4-g-17
K77	Safety shutdown switch relay	4-g-17
K78	Front attachment circuit relay	4-g-17
K79	Front attachment circuit relay	4-g-17
S25	Main drive switch (threshing mechanism clutch).....	4-h-17
S55	Front attachment ON switch.....	4-h-17
S57	Front attachment reverse switch	4-g-17
Y86	Reverse front attachment solenoid coil	5-h-16
Y88	Front attachment clutch solenoid coil.....	5-j-19

Measured value table:

Item	Component	Measured value	Remark
K62	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - pin 86) (Pin 30 - pin 87a) (Pin 30 - pin 87)
K77 K78 K79	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - pin 86) (Pin 30 - pin 87a) (Pin 30 - pin 87)
Y86	Solenoid coil	4.5 A 2.7 Ω	
Y88	Solenoid coil	0.75 A 16 Ω	

Description of function:**Front attachment circuit**

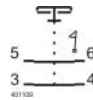
Engaging the front attachment drive requires two pre-conditions, i.e. relay K60 must be actuated by unlocking the road travel switch S52 and the threshing mechanism must be engaged by relay K63.

- S55 neutral position



In the neutral position of pushbutton S55, pins 3 + 4 are open and pins 5 + 6 are closed.

- Front attachment ON



After actuating pushbutton S55 (pins 3 + 4 closed, pins 5 + 6 closed), earth is applied to solenoid coil Y88 – the front attachment engages.



Relay K78 switches in parallel via S55 (pins 5 + 6) and remains locked in so that the front attachment remains engaged even after releasing pushbutton S55 (neutral position).

Important! The power supply of solenoid coil Y88 depends on the safety shutdown switch relay K77 (diagram 7).

- Front attachment OFF



Pressing pushbutton S55 (pins 5 + 6 open) interrupts the locked-in position of relay K78 – the front attachment disengages.

Reversing safety circuit

When engaging the front attachment, relay K79 is also actuated in parallel and cuts the earth supply to the front attachment reverse pushbutton S57. Reversing therefore is possible only with the front attachment disengaged.

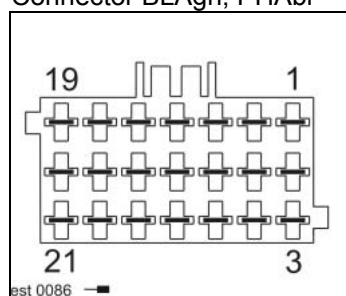
Reversing circuit (hydraulic)

When reversing, the front attachment reverse solenoid coil Y86 is actuated by switch S57 via relay K62.

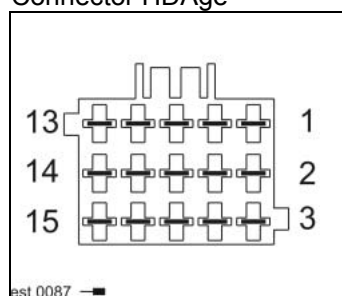
Important! The earth supply of pushbutton S57 depends on relay K79 – Reversing safety circuit.

Connector pin definition:

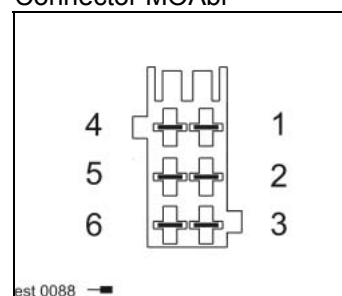
Connector BLAgn, PHAbl



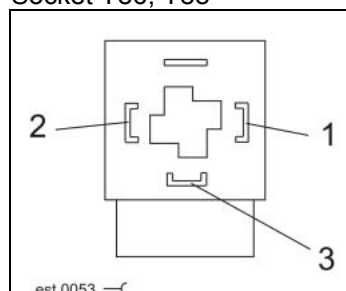
Connector HDAge



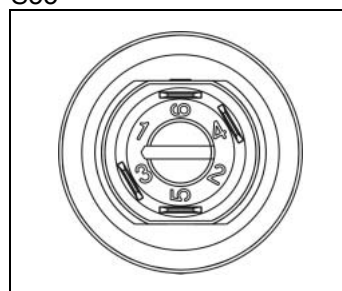
Connector MOAbr



Socket Y86, Y88



S55

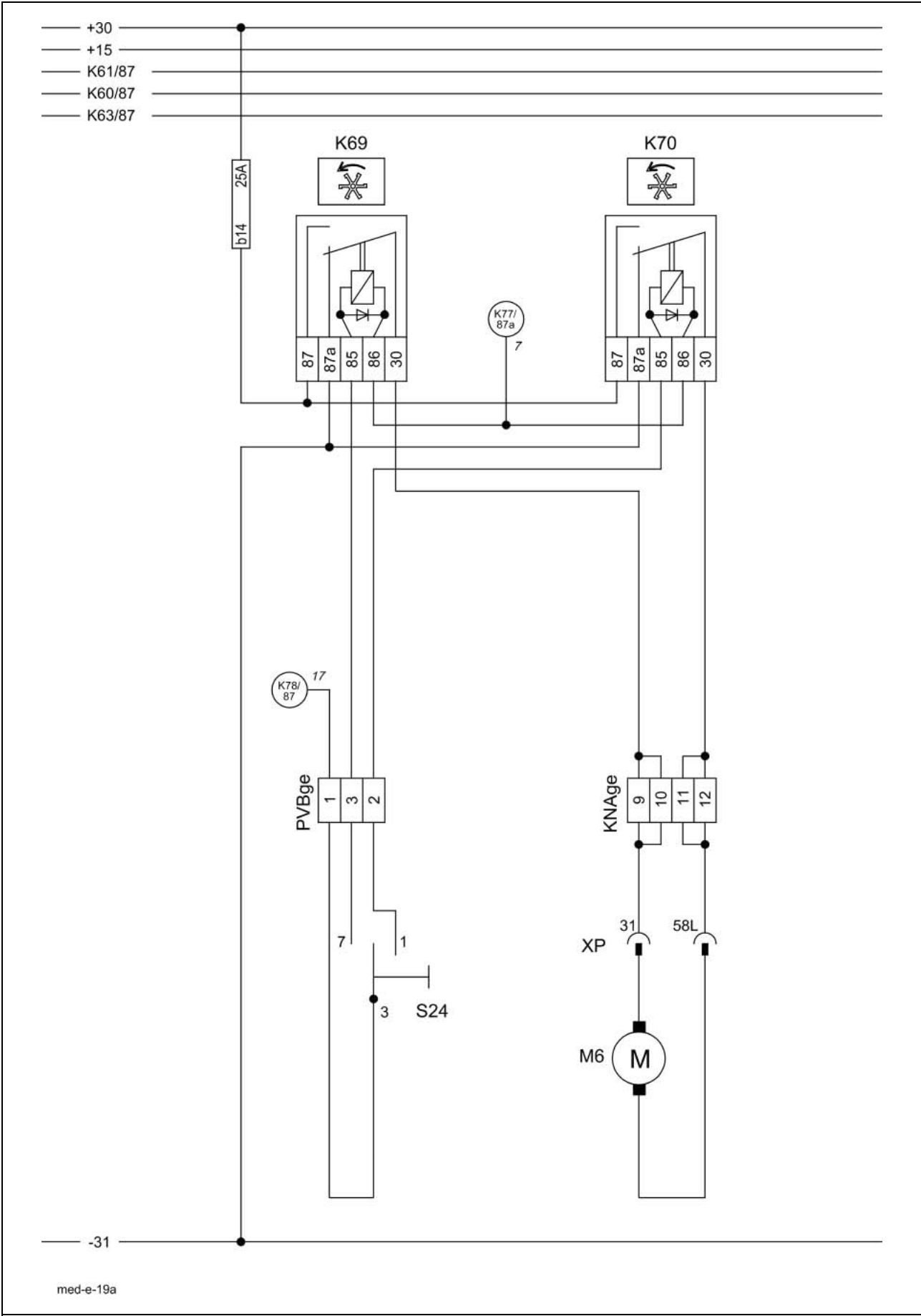
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 17	BLA 17	K78/85	K79/85			0.75	br/ye
BLAgn - 18	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	0.75	br/ye
HDAge - 8	MASSE	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	PVC 12	CAC 8	CAC 17	FSA 1		
	APA 8	MOA 2	HKA 19	PHA 2	KNA 2		
	K79/30	K57/31	K61/85	K52/85	K53/85		
	K66/85	K69/87a	K70/87a	K71/87a	K72/87a		
	K75/85	K77/85	BFA 3	ASA 1	KBA 5		
	KBA 9	KBA 10	K54/85	ZGA 3	ZGA 4		
	MASSE	PVA 21	PVB 6	MFA 1	MFA 2		
	LSB 10	LSB 4					
HDAge - 15	MOB 18	KNA 17	KNA 18	K62/87	HDA 15	1.5	bk/gn
MOAbr - 3	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	1.0	br/ye
MOAbr - 4	PVB 5	MOA 4	MOA 5	K69/86	K70/86	1.0	bk/vi
	K63/86	K78/86	K79/86				
PHAbl - 1	PHA 1	K62/85				0.5	br/gn
PHAbl - 10	PHA 10	K79/87a				0.75	br/bl
PHAbl - 12	PHA 12	K63/85	K78/30			1.5	gn/wh
PHAbl - 13	PHA 13	PVB 1	K78/87	BLA 18	MOA 3	1.5	br/ye
PHAbl - 16						0.75	br/ye
PHAbl - 17						0.75	br/ye

19a

Reel variable-speed drive

19a Reel variable-speed drive



Key to diagram:

		Coordinates
K69	Reel speed adjustment relay	4-g-17
K70	Reel speed adjustment relay	4-g-17
K77	Safety shutdown switch relay	4-g-17
K78	Front attachment identification relay.....	4-g-17
M6	Reel speed adjustment motor.....	5-l-19
S24	Reel speed adjustment switch.....	4-g-17

Measured value table:

Item	Component	Measured value	Remark
K69	Remote control relay	85±7 Ω	(Pin 85 - Pin 86)
K70		20 A	(Pin 30 - Pin 87a)
		40 A	(Pin 30 - Pin 87)
M6	Engine	12 - 15 A	Short-circuit current
		2 - 4 A	Working current

Description of function:

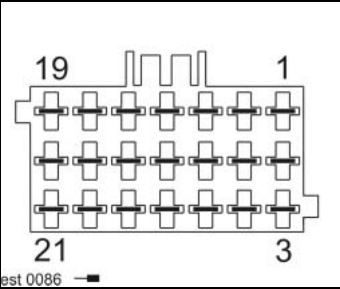
Reel speed adjustment
circuit

The reel speed adjustment electric motor M6 rotates clockwise or counterclockwise by means of switch S24 and relay K69 or K70. Adjustments are only allowed while the reel is rotating.

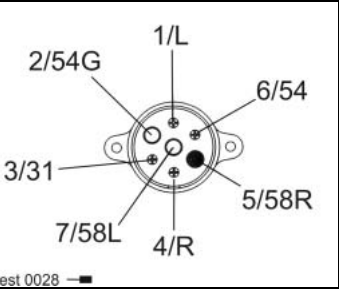
Important! The power supply of relays K69 and K70 depends on the safety shutdown switch relay K77 (diagram 7).
The earth supply at switch S24 depends on relay K78 – Front attachment On (diagram 17).

Connector pin assignment:

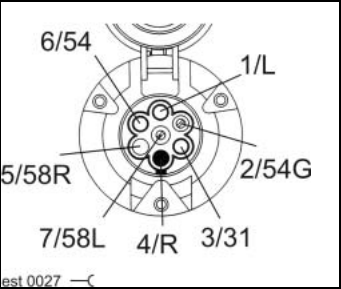
Connector KNAge, PVBge



Connector XP



Socket XP



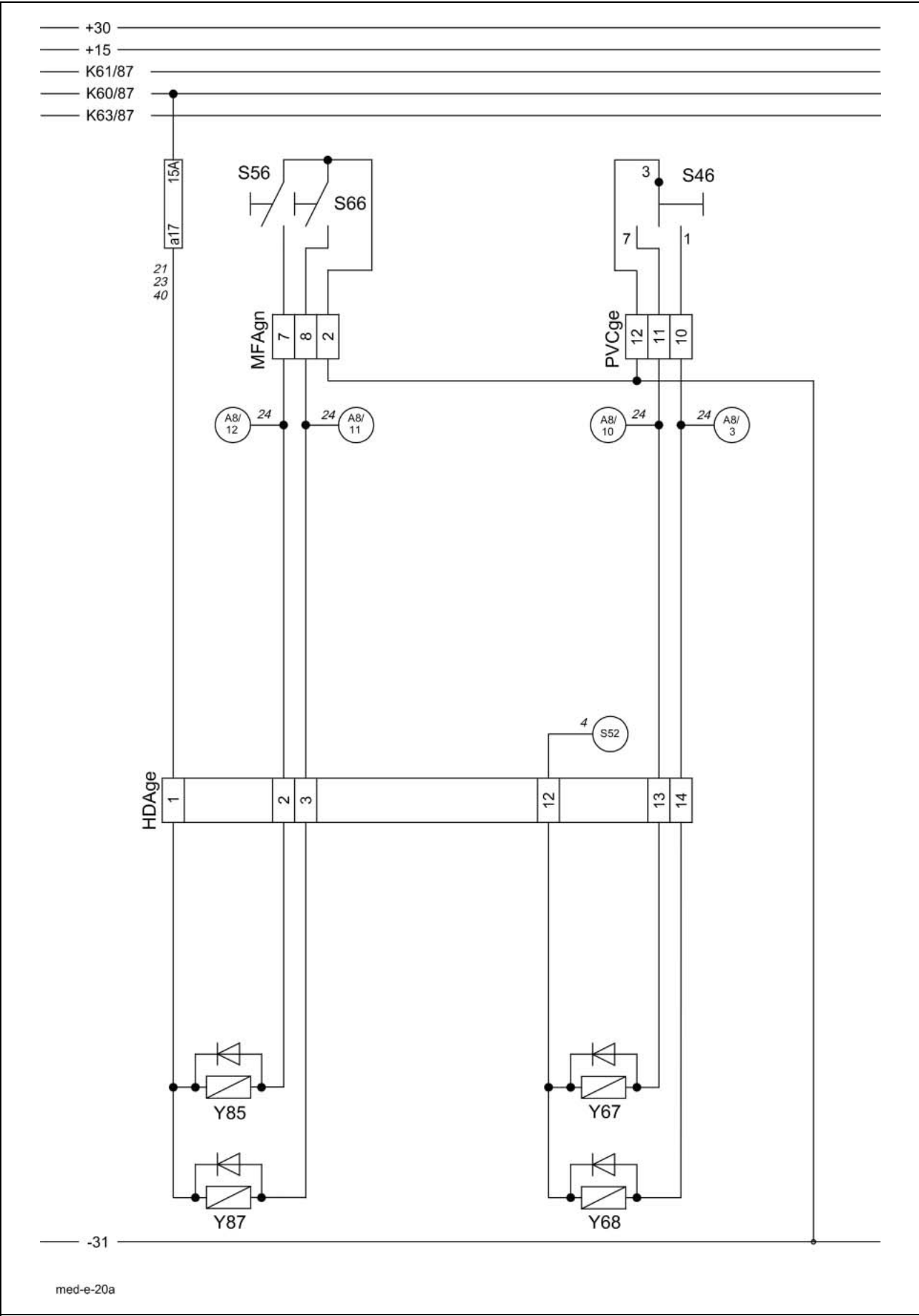
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KNAge - 9	KNA 10	K69/30				1.5	gn/wh
KNAge - 10	KNA 9	K69/30				1.5	gn/wh
KNAge - 11	K70/30	KNA 12				1.5	gn/ye
KNAge -12	K70/30	KNA 11				1.5	gn/ye
PVBge - 1	PHA 13	K78/87	BLA 18	MOA 3		0.75	br/ye
PVBge - 2	K70/85					0.75	vi/rt
PVBge - 3	K69/85					0.75	vi/bk
XP - 31						2.5	gn/wh
XP - 58L						2.5	gn/ye

20a

**Front attachment raise/lower,
transverse control**

20a Front attachment raise/lower, transverse control



Key to diagram:

		Coordinates
A8	AUTOCONTOUR module (CAC).....	4-g-17
S46	Cutterbar transverse control switch (manual).....	4-g-17
S52	Road travel switch (red).....	4-g-17
S56	Raise front attachment switch	3-g-18
S66	Lower front attachment switch.....	3-g-18
Y67	Solenoid coil AUTOCONTOUR transverse control left.....	5-h-16
Y68	Solenoid coil AUTOCONTOUR transverse control right.....	5-h-16
Y85	Raise front attachment solenoid coil.....	5-h-16
Y87	Lower front attachment solenoid coil.....	5-h-16

Measured value table:

Item	Component	Measured value	Remark
Y67	Solenoid coil	4.5 A	
Y68	Solenoid coil	2.7 Ω	
Y85	Solenoid coil	3.3 A	
Y87	Solenoid coil	3.6 Ω	

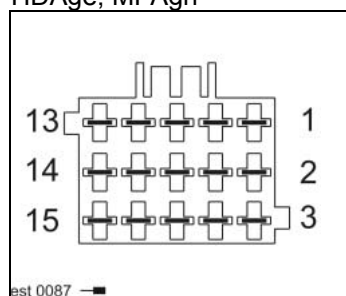
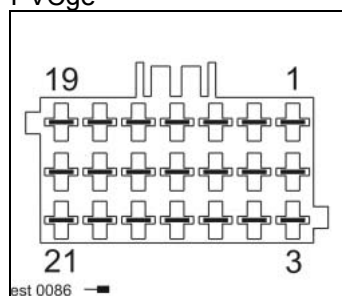
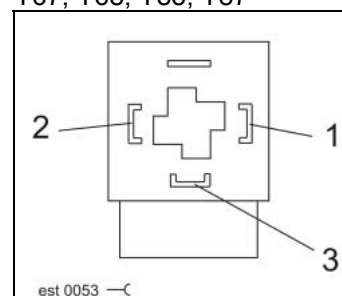
Description of function:

Raise/lower front
attachment (manual)

Depending on the actuation of pushbutton S56 and/or S66, the corresponding solenoid coils Y87 / Y85 are actuated – the front attachment is raised or lowered.

Transverse control (manual)
circuit

Voltage is applied to the solenoid coils Y67/Y68 as a function of the road travel switch S52. After actuation of switch S46, the required earth is connected either to solenoid coil Y67 or Y68.

Connector pin assignment:Connector
HDAge, MFAgnConnector
PVCgeSocket
Y67, Y68, Y85, Y87**Interconnection list:**

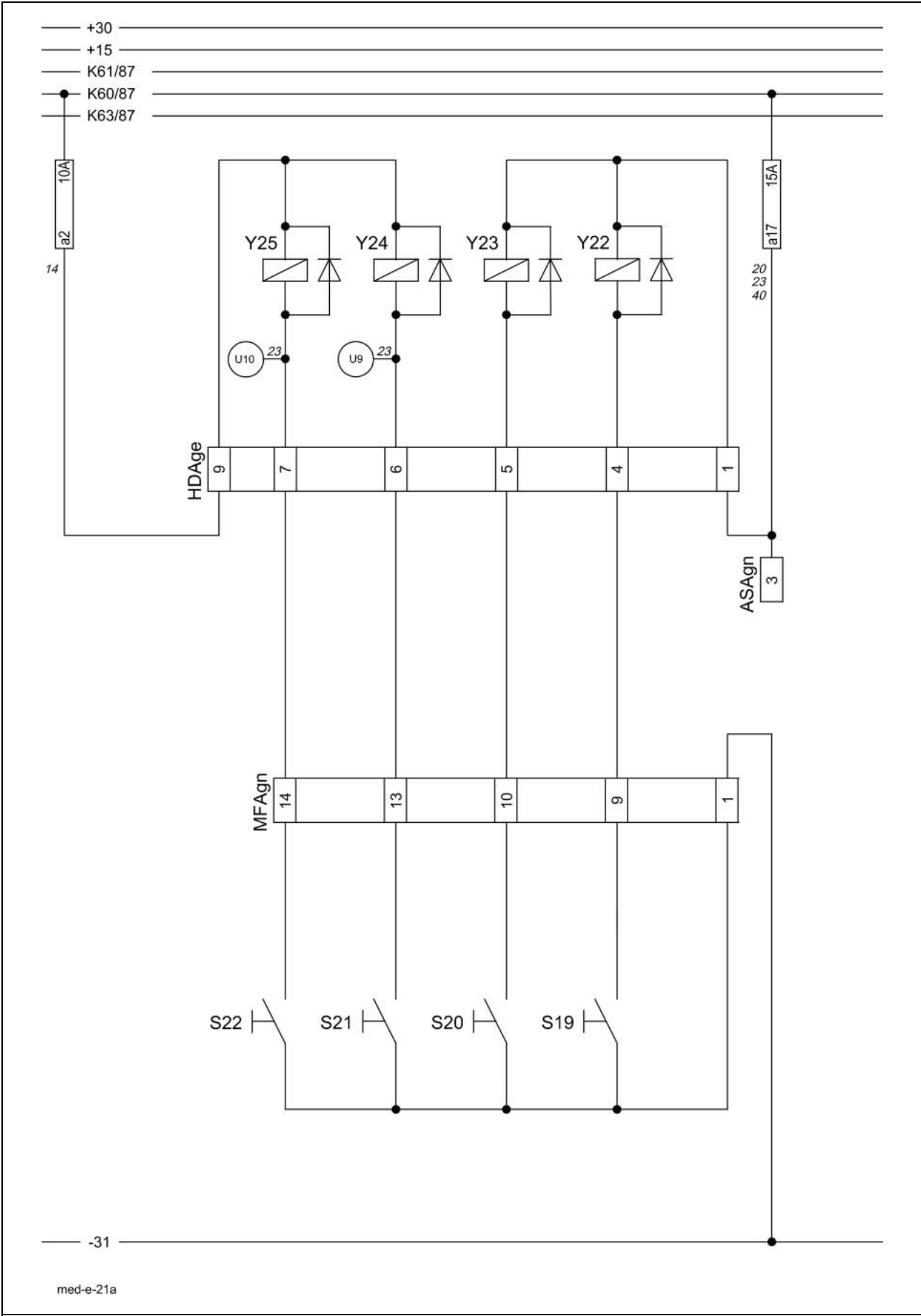
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HDAge - 1	ASA 3	a17a				1.5	gn/vi
HDAge - 2	CAC 12	MFA 7	DI 5	KNA 15		1.5	br/bk
HDAge - 3	CAC 11	MFA 8	DI 6	KNA 16		1.5	br/rd
HDAge - 12	PHA 7	PVC 9	K60/86	CAC 1	CAC 14	1.5	bl/gn
	K56/86	KNB 2					
HDAge - 13	PVC 11	CAC 10				1.5	br/gn
HDAge - 14	PVC 10	CAC 3				1.5	br/ye
MFAgn - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
MFAgn - 7	CAC 12	DI 5	KNA 15	HDA 2		0.75	br/bk
MFAgn - 8	CAC 11	DI 6	KNA 16	HDA 3		0.75	br/rd
PVCge - 10	CAC 3	HDA 14				1.5	br/bl
PVCge - 11	CAC 10	HDA 13				1.5	br/gn
PVCge - 12	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

21a

Reel adjustment

- Folding the maize picker /
snapping plate adjustment see 21b

21a Reel adjustment



Key to diagram:

		Coordinates
S19	Raise reel switch.....	3-g-18
S20	Lower reel switch	3-g-18
S21	Reel forward switch.....	3-g-18
S22	Reel backward switch	3-g-18
U10	Switch (external) Fold cutterbar to transport position	5-g-17
U9	Switch (external) Fold cutterbar to working position	5-g-17
Y22	Reel raise solenoid coil	5-h-16
Y23	Reel lower solenoid coil	5-h-16
Y24	Reel forward solenoid coil.....	5-h-16
Y25	Reel backward solenoid coil	5-h-16

Measured value table:

Item	Component	Measured value	Remark
Y22	Solenoid coil	3.3 A	
Y23	Solenoid coil	3.6 Ω	
Y24	Solenoid coil	4.5 A	
Y25	Solenoid coil	2.7 Ω	

Description of function:

Reel raise/lower circuit

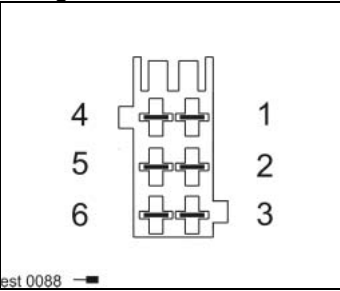
In the reel raise/lower function, the corresponding solenoid coils Y22 / Y23 are actuated directly by switches S19 / S20.

Reel forward/backward circuit

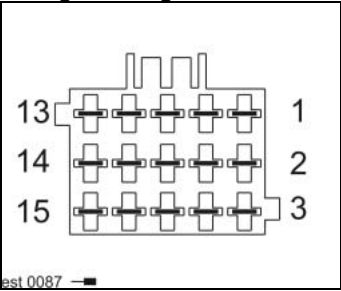
In the reel forward/backward function, the corresponding solenoid coils Y24 / Y25 are actuated directly by switches S21 / S22.

Connector pin assignment:

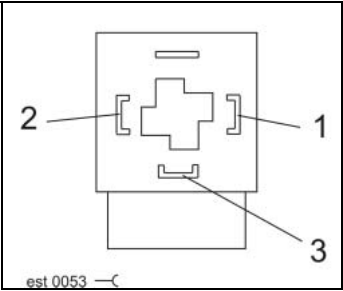
Connector
ASAgN



Connector
HDAge, MFAgN



Socket
Y22, Y23, Y24, Y25



Interconnection list:

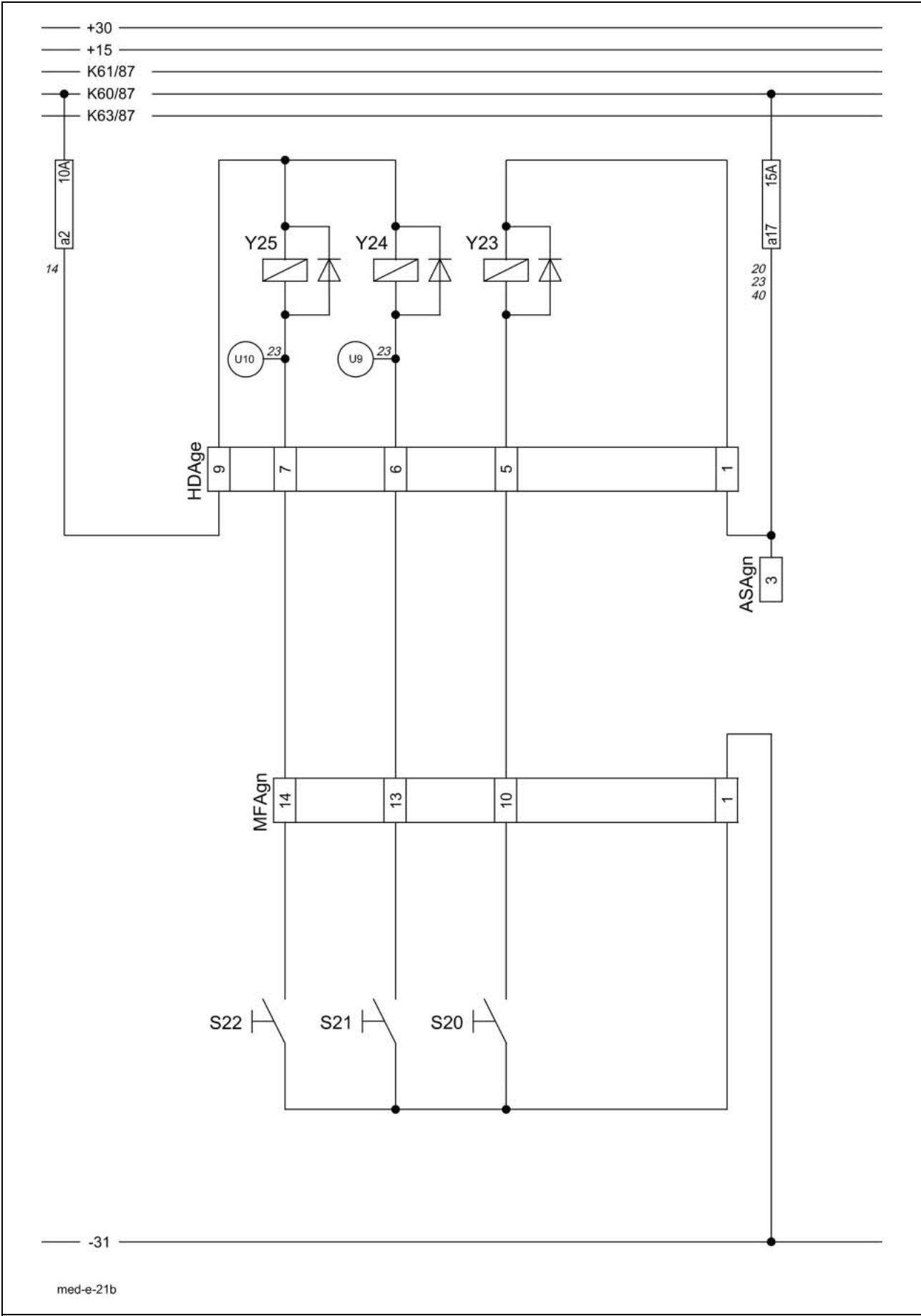
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HDAge - 1	ASA 3	a17a				1.5	gn/vi
HDAge - 4	MFA 9					1.5	ye/wh
HDAge - 5	MFA 10					1.5	ye/rd
HDAge - 6	MFA 14					1.5	gn/pi
HDAge - 7	HDA 7					1.5	gn/rd
HDAge - 9	K73/15	a2a				1.5	vi/gn
MFAgN - 5	LSB 13					0.75	bk/ye
MFAgN - 9	HDA 4					0.75	ye/wh
MFAgN - 10	HDA 5					0.75	ye/rd
MFAgN - 13	HDA 6					0.75	gn/pi
MFAgN - 14	HDA 7					0.75	gn/rd

21b

**Folding the maize picker /
snapping plate adjustment**

- Reel adjustment see 21a

21b Folding the maize picker / snapping plate adjustment



Key to diagram:

		Coordinates
S20	Lower reel switch	3-g-18
S21	Reel forward switch.....	3-g-18
S22	Reel backward switch	3-g-18
U9	Switch (external) Fold cutterbar to working position.....	5-g-17
U10	Switch (external) Fold cutterbar to transport position	5-g-17
Y23	Reel lower solenoid coil	5-h-16
Y24	Solenoid coil Reel forward / Fold snapping unit to transport position / Snapping plate clearance wide	5-h-16
Y25	Solenoid coil Reel backward / Fold snapping unit to working position / Snapping plate clearance narrow	5-h-16

Measured value table:

Item	Component	Measured value	Remark
Y23	Solenoid coil	3.3 A 3.6 Ω	
Y24 Y25	Solenoid coil	4.5 A 2.7 Ω	

Description of function:

Fold maize picker to working position

In the function "Fold maize picker to working position", the corresponding solenoid coil Y25 is actuated directly by the reel backward switch S22. The reel backward switch S22 must be actuated for another 6 seconds after the folding procedure in order to tension the system hydraulically.

Fold maize picker to transport position

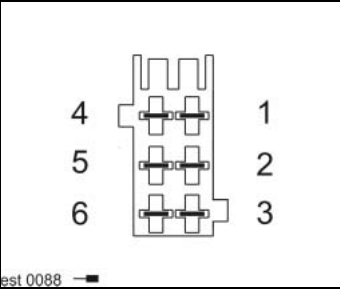
In the function "Fold maize picker to transport position", the corresponding solenoid coil Y24 is actuated directly by the reel forward switch S21. Solenoid coil Y23 must be actuated in parallel with this function by the reel lower switch S20.

Snapping plate adjustment

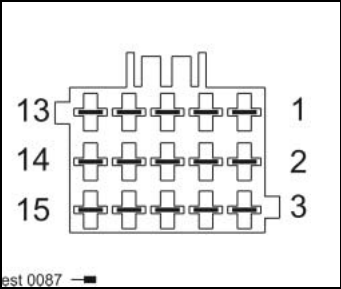
In the function "Snapping plate adjustment", the corresponding solenoid coils Y24 / Y25 are actuated directly by the reel forward/backward switches S21 / S22.

Connector pin assignment:

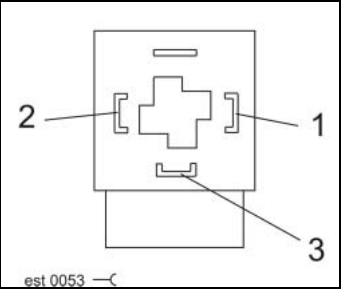
Connector ASAgN



Connector HDAge, MFAgn



Socket Y23, Y24, Y25



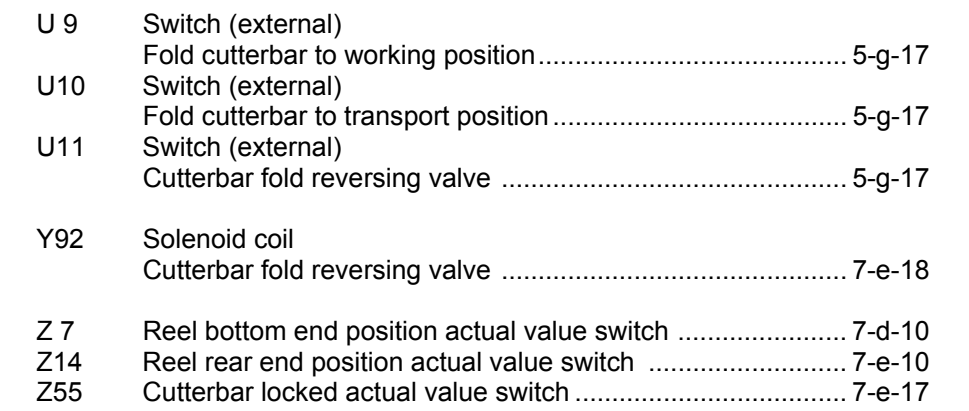
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HDAge - 1	ASA 3	a17a				1.5	gn/vi
HDAge - 5	MFA 10					1.5	ye/rd
HDAge - 6	MFA 13					1.5	gn/pi
HDAge - 7	MFA 14					1.5	gn/rd
HDAge - 9	K73/15	a2a				1.5	vi/gn
MFAgn - 5	LSB 13					0.75	bk/ye
MFAgn - 10	HDA 5					0.75	ye/rd
MFAgn - 13	HDA 6					0.75	gn/pi
MFAgn - 14	HDA 7					0.75	gn/rd

23a

Folding the cutterbar

Coordinates



Item	Component	Measured value	Remark
Y92	Solenoid coil	4.5 A 2.7 Ω	

Description of function:

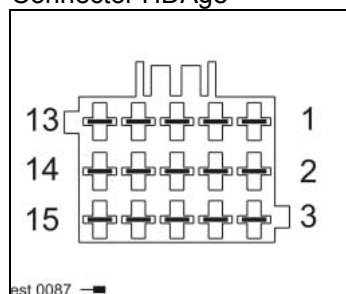
Folding the cutterbar

When using a folding cutterbar, the external switches U9/U10 are parallel with the reel forward/backward switches S21/S22.
(diagram 21a).

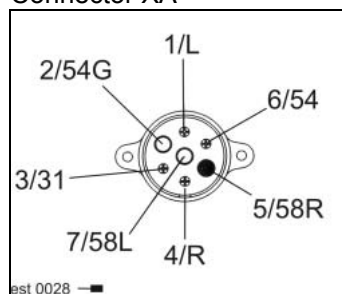
When folding to transport position, the solenoid coil Y92 for the cutterbar fold reversing valve must additionally be actuated by the external switch U 11. As a pre-condition for this, the switches Z7, Z14 and Z55 must be closed.

Connector pin assignment:

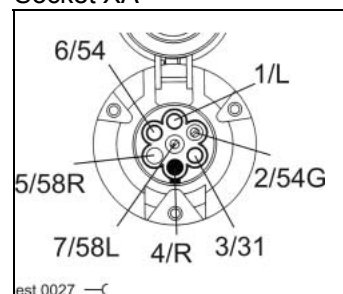
Connector HDAge



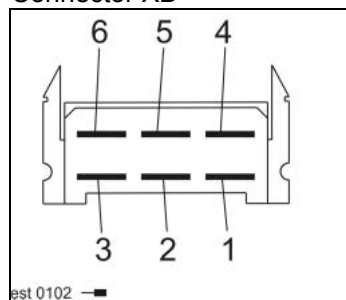
Connector XA



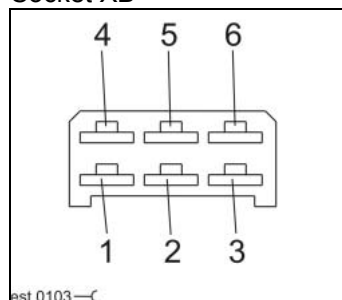
Socket XA



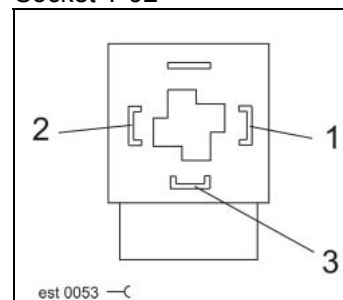
Connector XB



Socket XB



Socket Y 92

**Interconnection pin list:**

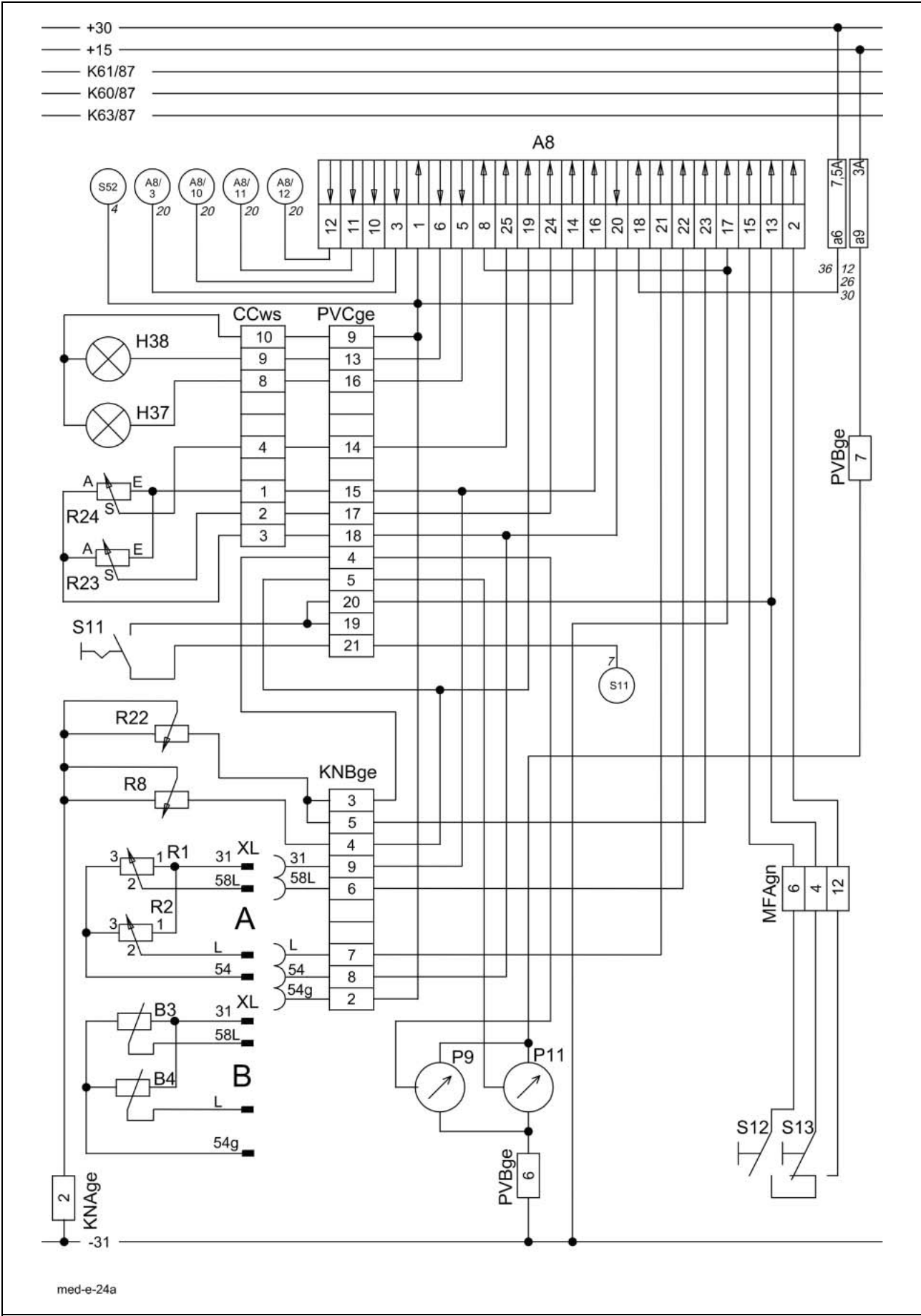
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HDAge - 1	ASA 3	a17a				1.5	gn/vi
HDAge - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

24a

AUTOCONTOUR (CAC)

- Contour see 24b

24a AUTOCONTOUR (CAC)



Key to diagram:

		Coordinates
A8	AUTOCONTOUR module (CAC).....	4-g-17
B 3	AUTOCONTOUR sensor Left sensing band (actual value).....	9-d-26
B 4	AUTOCONTOUR sensor Right sensing band (actual value)	9-d-10
H37	Cutting height control signal light.....	4-g-17
H38	Pre-set cutting height control signal light.....	4-g-17
P 9	Cutterbar spring pre-stress indicator	4-g-17
P11	Pre-set cutting height control indicator	4-g-17
R 1	AUTOCONTOUR potentiometer Left sensing band (actual value).....	9-d-26
R 2	AUTOCONTOUR potentiometer Right sensing band (actual value)	9-d-10
R 8	Potentiometer Feeder housing position (actual value).....	6-h-17
R22	Potentiometer Cutterbar spring pre-stress (actual value)	7-h-17
R23	Potentiometer Cutting height control (set value)	4-g-17
R24	Potentiometer Pre-set cutting height control (set value)	4-g-17
S11	CAC main switch.....	4-g-17
S12	Cutting height control / Automatic ground pressure control (CAC) switch.....	5-h-16
S13	Pre-set cutting height control (CAC) switch	5-h-16
S25	Main drive switch (threshing mechanism clutch)	3-h-17

Notes:

- A - when potentiometers (5 volt system) are fitted
- B - when Hall sensors (12 volt system) are fitted

Measured value table:

Item	Component	Measured value	Remark
B 3	Sensor	12 V	(Pin 1 - 2)
B 4	Sensor	0.25 V - 4.75 V	(Pin 1 - 3)
R 1	Potentiometer	4.25 kΩ	(Pin 1 - 3) coil
R 2	Potentiometer	1.50 - 5.75 kΩ	(Pin 2 - 1/3) slider
R 8	Potentiometer	10 - 190 Ω	
R22	Potentiometer	0 - 22 kΩ	
R23	Potentiometer		
R24	Potentiometer		

Description of function:**AUTO-CONTOUR**
function

AUTO-CONTOUR (CAC) includes the functions cutting height control and/or pre-set cutting height control.
The AUTOCONTOUR (CAC) module A8 is activated by actuating switch S11.

Important! On machines with **AUTO-CONTOUR**, a module with the spare part no. **011 015.x** must be used which is **different** from the CONTOUR system.

Cutting height control

The function "Cutting height control" is activated by actuating switch S12 in the module CAC A8.
In the cutting height control, both the sensors B3/B4 and/or potentiometer R1/R2 of the sensing bands on the cutterbar and the cutterbar spring pre-stress potentiometer R22 are active as actual values. The set value is defined by potentiometer R23.
Changes of the signal values are detected by module A8. Now the relevant solenoid coils of the individual functions (transverse control right/left and/or front attachment raise/lower) are actuated by module A8 until the set values and the actual values of the corresponding sensors / potentiometers are identical.

Pre-set cutting height control

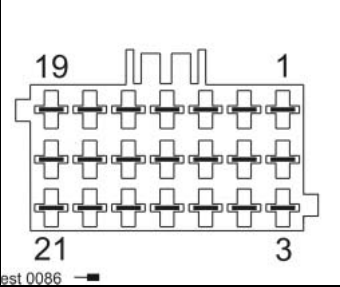
The function "Pre-set cutting height control" is activated by actuating switch S13 in the module CAC A8.
When this function is selected, there is no active cutting height control. The signal values of the feeder housing position (R8 – actual value) and pre-set cutting height control (R24 – set value) potentiometers are made identical by the relevant solenoid coils (raise/lower front attachment).

Emergency clearance

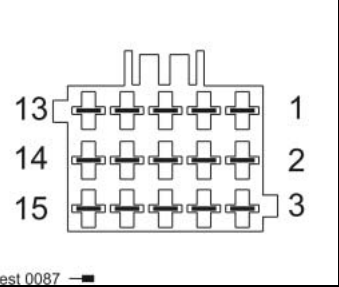
In the function "Pre-set cutting height control", the front attachment makes way by means of the transverse control as soon as a sensing band has ground contact (e.g. an obstacle). The front attachment must now be returned manually.

Connector pin assignment:

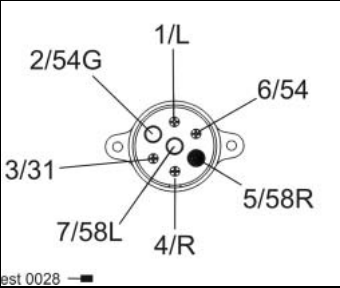
Connector KNAge, PHAbI, PVBge, PVCge



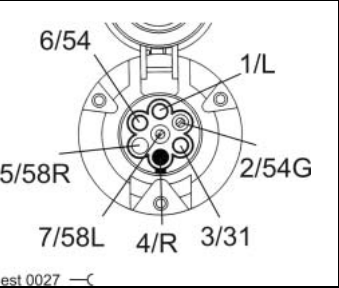
Connector KNBge MFAgn



Connector XL



Socket XL



Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
CCws - 1						0.5	gr/bl
CCws - 10						0.5	bl/gn
CCws - 2						0.5	bl/rd
CCws - 3						0.5	bk/gn
CCws - 4						0.5	ye/gr
CCws - 8						0.5	br/wh
CCws - 9						0.5	gr/rd
KNAge - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KNBge - 2	PHA 7	HDA 12	PVC 9	K60/86	CAC 1	0.75	bl/gn
	CAC 14	K56/86					
KNBge - 3	PVC 4					0.5	bl/wh
KNBge - 4	PVC 5	CAC 19				0.5	bl/gr
KNBge - 5	CAC 23					0.5	bl/bk
KNBge - 6	CAC 22					0.75	wh/bk
KNBge - 7	CAC 22					0.75	bk/bl
KNBge - 8	PVC 18	CAC 20				0.75	bk/gn
KNBge - 9	PVC 15	CAC 16				0.75	br/wh
MFAgn - 4	K55/30	PVC 20	CAC 13			0.75	ye/bk
MFAgn - 6	K55/85	DI 8	CAC 15			0.75	ye/br
MFAgn - 12	CAC 2					0.75	rd/ye
PHAbI - 11	PVC 21					1.5	bk/ye
PVBge - 7	a9a					0.5	bk

Interconnection list:

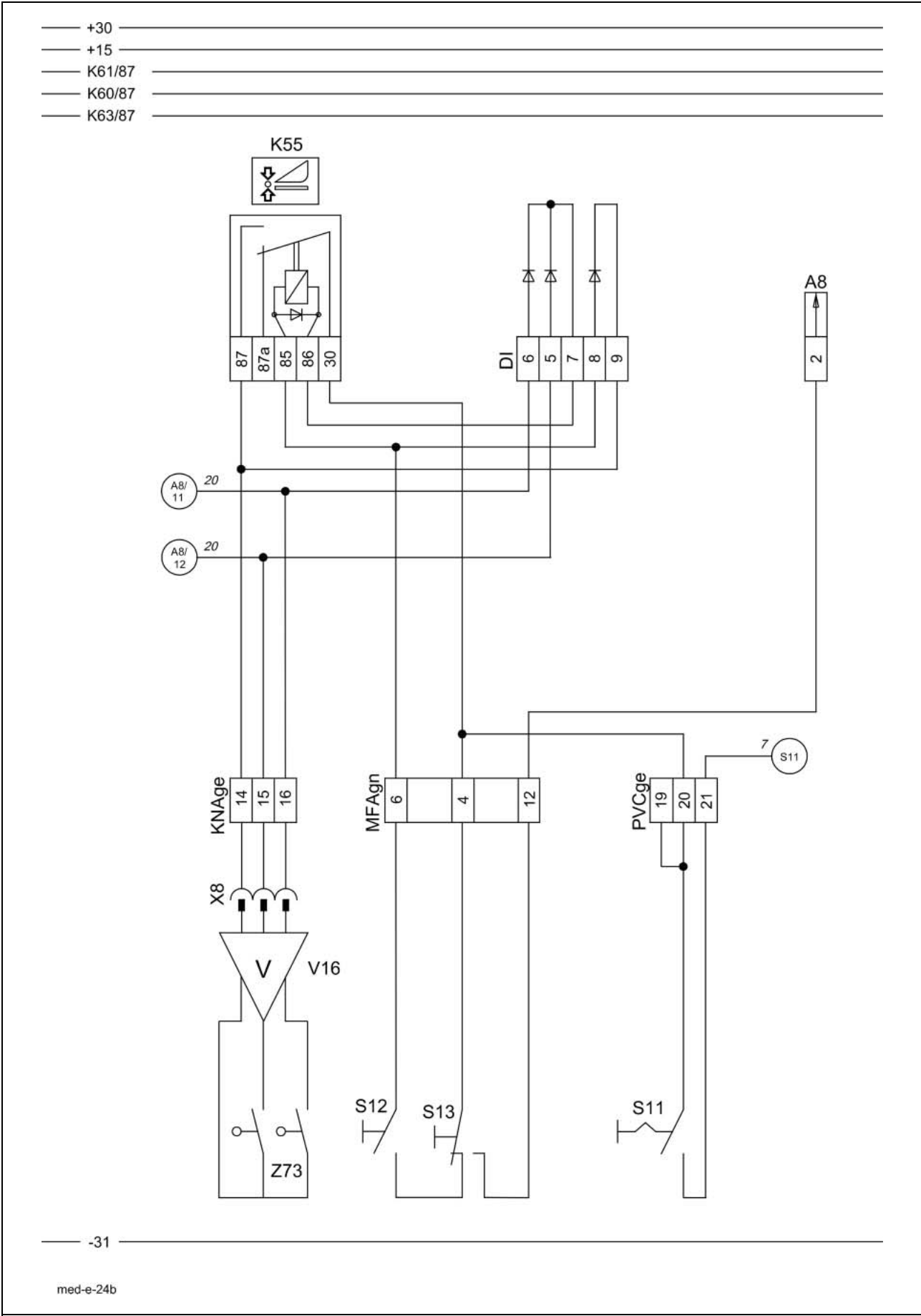
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PVCge - 4	KNB 3					0.5	bl/wh
PVCge - 5	KNB 4	CAC 19				0.5	bl/gr
PVCge - 9	PHA 7	HDA 12	K60/86	CAC 1	CAC 14	1	bl/gn
	K56/86	KNB 2					
PVCge - 13	CAC 6					0.5	gr/rd
PVCge - 14	CAC 25					0.5	ye/gr
PVCge - 15	CAC 16	KNB 9				0.5	gr/bl
PVCge - 16	CAC 5					0.5	br/wh
PVCge -17	CAC 24					0.5	bl/rd
PVCge - 18	CAC 20	KNB 8				0.5	bk/gn
PVCge -20	K55/30	MFA 4	CAC 13			1.5	ye/bk
PVCge - 21	PHA 11					1.5	bk/ye
XL - 31						0.75	br/wh
XL - 54						0.75	bk/gn
XL - 54g						0.75	bl/gn
XL - 58L						0.75	wh/bk
XL - L						0.75	bk/bl

24b

Contour

- AUTOCONTOUR (CAC) see 24a

24b CONTOUR



Key to diagram:

		Coordinates
A8	AUTOCONTOUR module (CAC)	4-g-17
DI	Diode PCB	4-g-17
K55	Contour circuit relay	4-g-17
S11	Contour main switch	4-g-17
S12	Cutting height control switch /	
	Automatic ground pressure control	3-g-18
S13	Pre-set cutting height control switch	3-g-18
S25	Main drive switch (threshing mechanism clutch)	3-h-17
V16	Contour control unit	7-h-19
Y85	Raise front attachment solenoid coil	5-h-16
Y87	Lower front attachment solenoid coil	5-h-16
Z73	Automatic ground pressure control actual value switch	7-h-19

Measured value table:

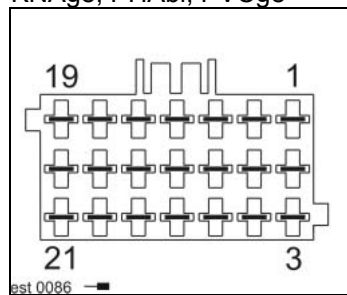
Item	Component	Measured value	Remark
K55	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y85 Y87	Solenoid coil	3.3 A 3.6 Ω	

Description of function:

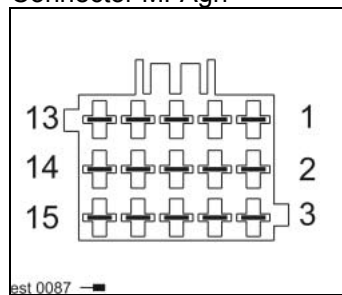
CONTOUR function	The CONTOUR system includes the functions automatic ground pressure control and pre-set cutting height control. The automatic ground pressure control is controlled by relay K55 and the pre-set cutting height control by the Contour module A8.
Automatic ground pressure control	<p>When relay K55 connects earth from pin 87 to switch Z73 (ground pressure), the cutterbar can be raised or lowered automatically, depending on the outside conditions.</p> <p>- ON</p> <p>After actuating the main switch S11, earth is applied to pin 30 of relay K55 when the threshing mechanism is engaged. Voltage is applied to pin 86 of relay K55 (see diagram 20a) via the unactivated solenoid coils Y85/Y87 and via the diode PCB DI.</p> <p>When pushbutton S12 is actuated, earth is connected to pin 85 of relay 55, the relay remains locked in.</p> <p>At the same time, the necessary earth is applied at the automatic ground pressure control switch Z73. Switch Z73 is coupled to the left-hand cutterbar spring. When the spring length changes, the earth applied to switch Z73 is connected to the corresponding solenoid valves Y85 or Y87. The cutterbar is raised or lowered (see diagram 20a).</p> <p>- OFF</p> <p>Deactivating the CONTOUR function is possible in several ways.</p> <ul style="list-style-type: none"> - Open switch S11; K55 drops out - Contour is deactivated. - Raise or lower the cutterbar manually; the corresponding solenoid coils Y85 or Y87 are actuated directly by S56 and/or S66, the cutterbar is raised or lowered. This changes the length of the cutterbar spring, switch Z73 connects earth to the other solenoid coil (Y87 or Y85). Both solenoid coils are actuated for a short period, the locking-in of K55 is stopped, K55 drops out – CONTOUR is deactivated.
Pre-set cutting height control	<p>The function "Pre-set cutting height control" is activated by actuating switch S13 in the module Contour A8.</p> <p>The signal values of the feeder housing position (R8 – actual value) and pre-set cutting height control (R24 – set value) potentiometers are made identical by the relevant solenoid coils (raise/lower front attachment).</p> <p>Important! On machines with CONTOUR system, a module with the spare part no. 011 026.x must be used which is different from the AUTO-CONTOUR system. In case of machines with CONTOUR system, potentiometer R 23 in the operating panel exists, but has no function. An existing potentiometer R 22 on the cutterbar spring serves merely for indicating the spring pre-stress in the panel.</p>

Connector pin assignment:

Connector
KNAge, PHAbI, PVCge



Connector MFAGn

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KNAge - 14	K55/87	DI 9				1.5	bl/gn
KNAge - 15	CAC 12	MFA 7	DI 5	HDA 2		0.75	br/bk
KNAge - 16	CAC 11	MFA 8	DI 6	HDA 3		0.75	br/rd
MFAGn - 4	K55/30	PVC 20	CAC 13			0.75	ye/bk
MFAGn - 6	K55/85	DI 8	CAC 15			0.75	ye/br
MFAGn - 12	CAC 2					0.75	rd/ye
PVCge - 20	K55/30	MFA 4	CAC 13			1.5	ye/bk
PVCge - 21	PHA 11					1.5	bk/ye
PHAbI - 11	PVC 21					1.5	bk/ye

25a

Speed monitoring

The diagram illustrates the electrical control system for a medical device. It features a central terminal block A12 with 26 pins. The wiring is as follows:

- Power Supply:** +30V and +15V lines are connected to the top of the terminal block. -31V is connected to the bottom.
- Terminal Block A12:** Pins 10, 21, 2, 16, 3, 25, 11, 1, 4, 13, 9, 12, 8, 14, and 5 are connected to various components.
- Relays and Solenoids:**
 - Relay B12 is connected to pins 10 and 21.
 - Relay B21 is connected to pins 2 and 16.
 - Relay B26 is connected to pins 3 and 25.
 - Relay B28 is connected to pins 11 and 1.
 - Relay B29 is connected to pins 4 and 13.
 - Solenoid H32 is connected to pins 9 and 12.
 - Solenoid H27 is connected to pins 8 and 14.
 - Solenoid H34 is connected to pins 5 and 10.
 - Solenoid H35 is connected to pins 21 and 2.
 - Solenoid H36 is connected to pins 16 and 3.
- Sensors and Diodes:**
 - DI (Digital Input) is connected to pins 1 and 11.
 - LSAGr (Limit Switch) is connected to pins 12 and 7.
 - WSII (Weight Sensor) is connected to pins 10 and 5.
 - H4 (Heater) is connected to pins 26 and 3.
- Other Components:**
 - KnAge (Knob) is connected to pins 7 and 4.
 - HKBbl (Heater) is connected to pins 5 and 2.
 - PVCge (Pressure Control Valve) is connected to pins 1, 2, and 3.
 - PVBge (Pressure Control Valve) is connected to pins 19, 20, and 18.
 - Z59 (Zener Diode) is connected to pins 11 and 1.

Coordinates

Measured value table:

Item	Component	Measured value	Remark
B10 B12 B21 B26 B28 B29	Sensor	1000-1200 Ω	inductive

Description of function:

Speed monitoring

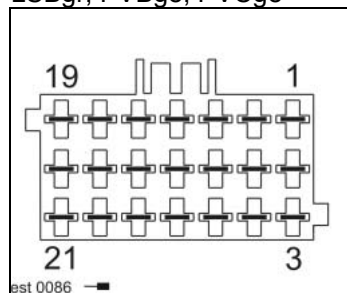
The frequencies of the individual sensors are processed by the speed monitoring module A12. If the allowed slip values are exceeded, the module activates the corresponding signal lights and the buzzer as an acoustic warning. The alarm signals are activated in a pulsed way by relay K58 (see diagram 3).

Important! The chopper speed monitoring is active only if switch Z59 is closed (straw chopper in working position).

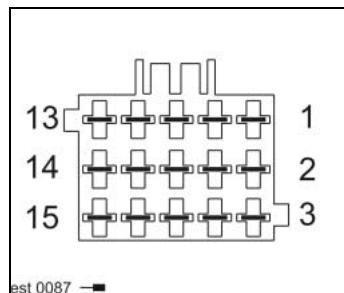
	SET speeds rpm	Min. speeds rpm
Straw walker	220	174
Returns elevator	308	230
Grain elevator		
MEGA 350	380	260
MEGA 360	450	260
Feed rake	520	385
Straw chopper		
2 cams	3300	2820
4 cams	1920	1410

Connector pin assignment:

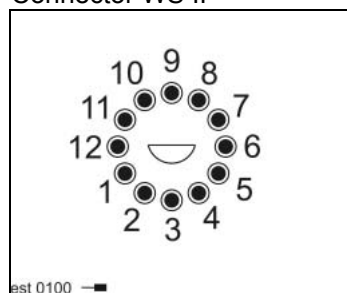
Connector HKBbl, KNAge, LSBgr, PVBge, PVCge



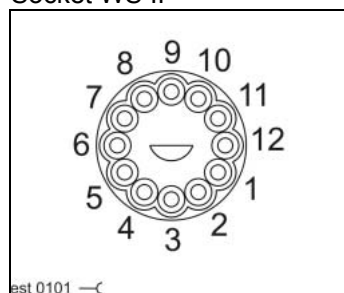
Connector LSAgr



Connector WS II



Socket WS II

**Interconnection list:**

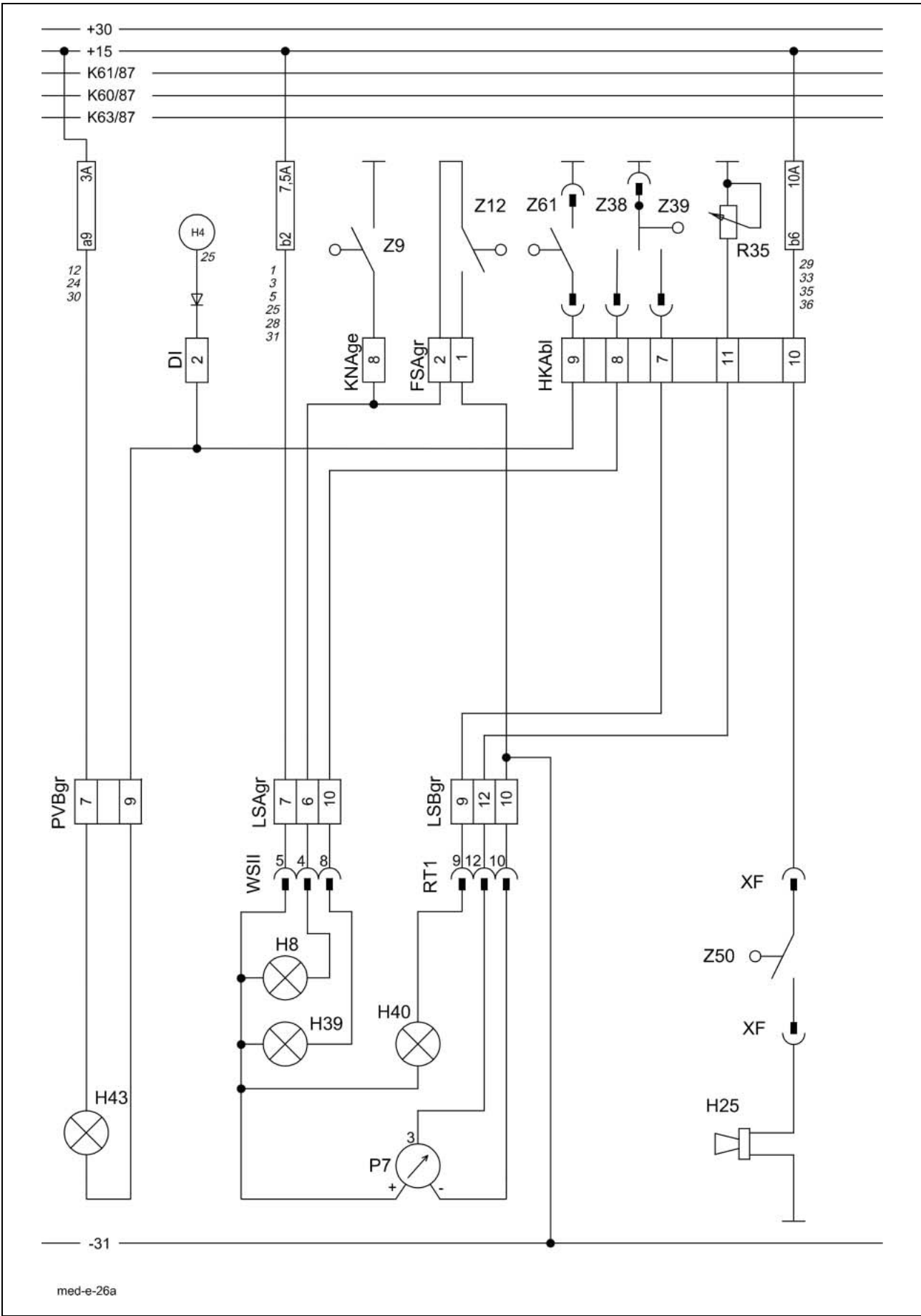
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 2	DZW 16					0.75	gn/or
HKBbl - 3	DZW 3	K79/87				0.75	br/ye
HKBbl - 4	DZW 21					0.75	gn/br
HKBbl - 5	DZW 2					0.75	gn/bl
HKBbl - 6	DZW 11					0.75	gn/wh
HKBbl - 7	DZW 25					0.75	gn/bk
KNAge - 7	DZW 10					0.75	gn/wh
LSAgr - 12	DI 3	DZW 14				0.5	or
PVBge - 18	DI 1					0.5	bk/wh
PVBge - 19	DZW 9					0.5	wh/bk
PVBge - 20	DZW 12					0.5	wh/gn
PVCge - 1	DZW 1					0.5	wh
PVCge - 2	DZW 4					0.5	wh/rd
PVCge - 3	DZW 13					0.5	wh/bk
WS II - 5						1.5	bk
WS II - 10						0.5	or

26a

Machine monitoring

- up to serial no. 835 00146
845 00123

26a Machine monitoring
up to serial no. 835 00146, 845 00123



Key to diagram:

		Coordinates
DI	Diode PCB	4-g-17
H4	Threshing mechanism STOP signal light.....	3-g-18
H8	Parking brake activated signal light	3-g-18
H25	Reversing horn.....	4-o-16
H39	Sieve pan / left steering position signal light.....	3-g-18
H40	Sieve pan / right steering position signal light	3-g-18
H43	Straw jam signal light.....	4-g-17
P7	Fuel tank level display.....	3-g-18
R35	Fuel level potentiometer.....	4-p-16
Z9	Brake lining wear actual value switch	7-i-18
Z12	Parking brake actual value switch	5-h-17
Z38	Left steering position actual value switch	7-q-19
Z39	Right steering position actual value switch.....	7-q-17
Z50	Ground speed control lever backward / reversing horn actual value switch.....	4-g-17
Z61	Straw jam warning actual value switch	3-g-18

Measured value table:

Item	Component	Measured value	Remark
R35	Potentiometer	10 - 190 Ω	

Description of function:

Straw jam warning

When a straw jam occurs in the straw walker house, pushbutton Z61 closes.

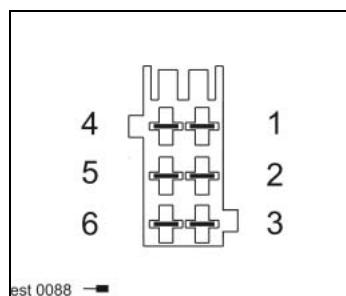
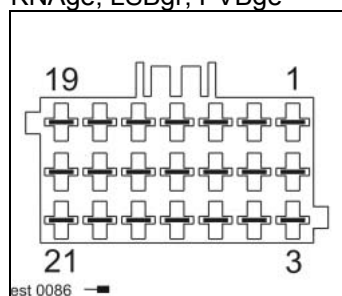
In this case, the signal lights H4 and H43 light up **permanently**.

At the same time, pulse relay K58 activates the following items **in a pulsed way**:

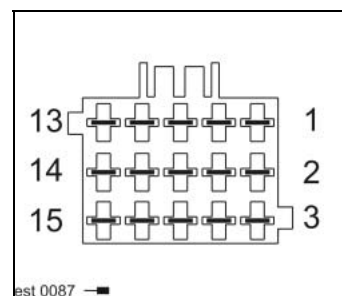
- Buzzer H 44
- Warning lights H 42 in the operations display screen
- Warning light H 45 on the vehicle information unit.
(also see diagram 25a)

Connector pin assignment:

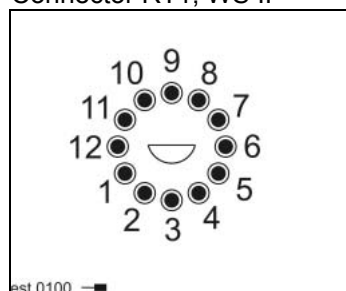
Connector FSAgr

Connector HKAbI,
KNAge, LSBgr, PVBge

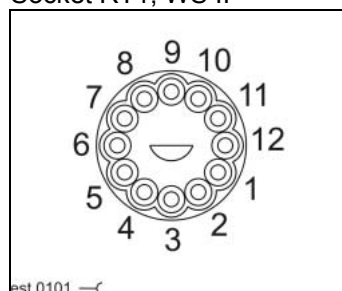
Connector LSAgr



Connector RT1, WS II



Socket RT1, WS II

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
FSAgr - 1	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
FSAgr - 2	LSA 6	KNA 8				0.75	br/wh
HKAbI - 7	LSB 9					0.75	bl/gr
HKAbI - 8	LSA 10					0.75	bl/or
HKAbI - 9	PVB 9	DI 2				0.75	wh/gn
HKAbI - 10	PHA 3	PVA 20	b6a	BLA 14	KBA4	0.75	bk
HKAbI - 11	LSB 12					0.75	bl/bk
KNAge - 8	LSA 6	FSA 2				0.75	br/wh
LSAgr - 6	KNA 8	FSA 2				0.75	br/wh
LSAgr - 7	b2a					1.5	bk
LSAgr - 10	HKA 8					0.75	bl/or

Interconnection list:

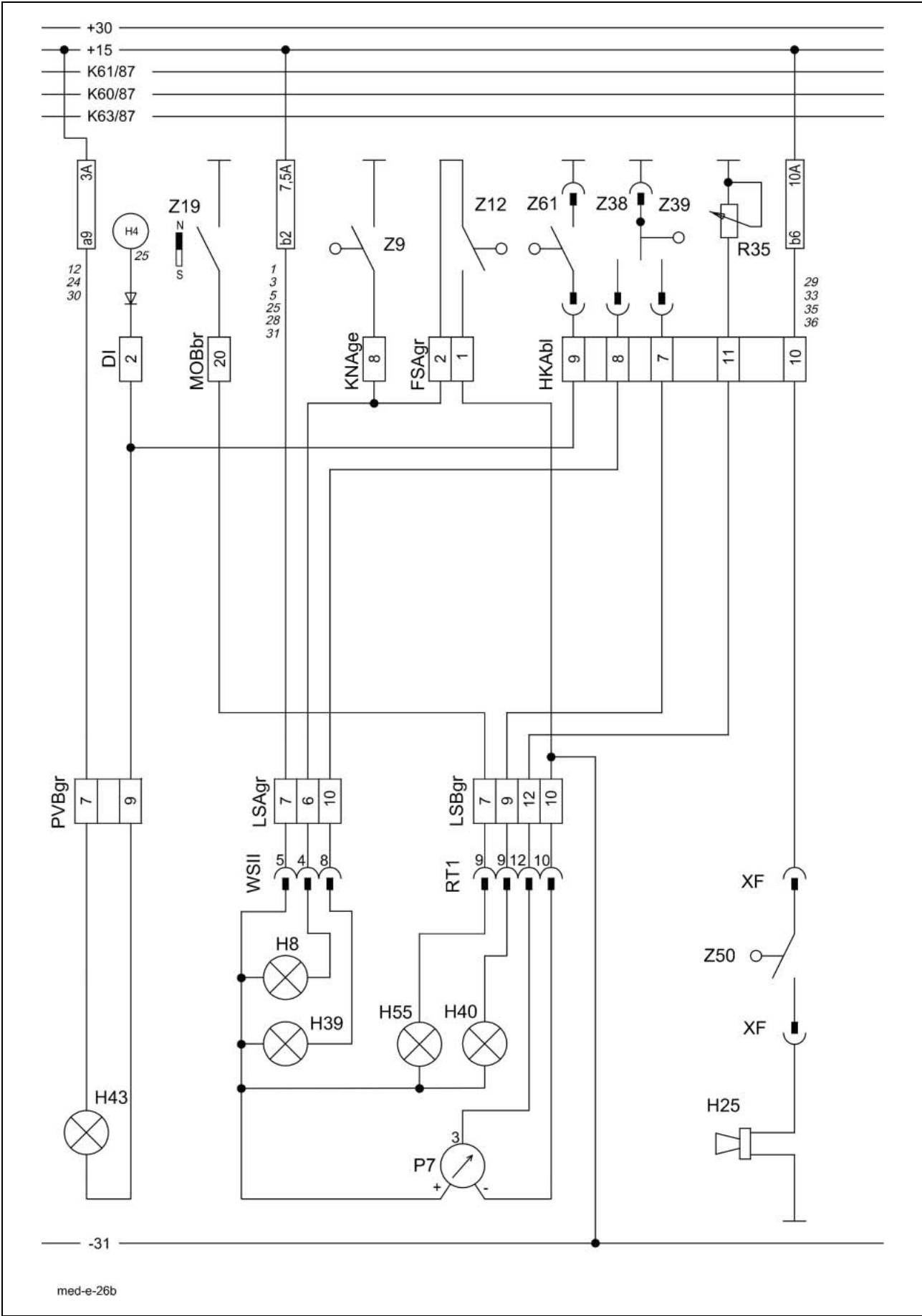
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSBgr - 9	HKA 7					0.75	bl/gr
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr - 12	HKA 11					0.75	bl/bk
PVBge - 7	a9a					0.5	bk
PVBge - 9	DI 2	HKA 9				0.75	wh/gn
PVBge - 20	DZW 12					0.5	wh/gn
RT1 - 9						0.75	bl/gr
RT1 - 10						1.5	br
RT1 - 12						0.75	bl/bk
WS II - 4						0.75	br/wh
WS II - 5						1.5	bk
WS II - 8						0.75	bl/or

26b

Machine monitoring

- from serial no. 835 00147
845 00124

26b Machine monitoring
from serial no. 835 00147, 845 00124



Key to diagram:

		Coordinates
DI	Diode PCB.....	4-g-17
H4	Threshing mechanism STOP signal light.....	3-g-18
H8	Parking brake actuated signal light	3-g-18
H25	Reversing horn	4-o-16
H39	Sieve pan / left steering position signal light	3-g-18
H40	Sieve pan / right steering position signal light.....	3-g-18
H43	Straw bolckage signal light.....	4-g-17
H55	Hydraulic oil level (min.) signal light	3-g-18
P7	Fuel tank filling level gauge	3-g-18
R35	Fuel level potentiometer	4-p-16
Z9	Brake lining wear actual value switch	7-i-18
Z12	Parking brake actual value switch.....	5-h-17
Z19	Hydraulic oil level (min.) actual value switch.....	3-i-19
Z38	Left steering position actual value switch.....	7-q-19
Z39	Right steering position actual value switch	7-q-17
Z50	Ground speed control lever reverse / reversing horn actual value switch	4-g-17
Z61	Straw blockage warning actual value switch.....	3-g-18

Measured value table:

Item	Component	Measured value	Remark
R35	Potentiometer	10 - 190 Ω	

Description of function:

Straw blockage warning

When a straw jam occurs in the straw walker house, pushbutton Z61 closes.

In this case, the signal lights H4 and H43 light up **permanently**.

At the same time, pulse relay K58 activates the following items **in a pulsed way**:

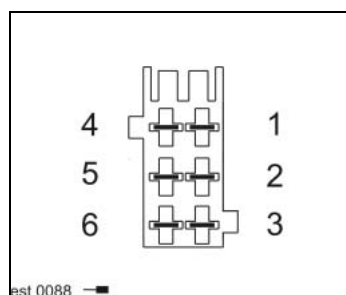
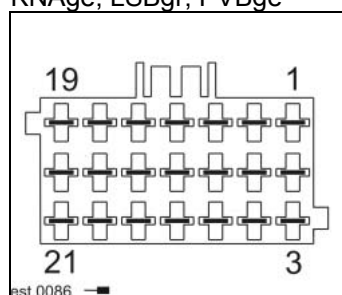
- Buzzer H 44
- Warning lights H 42 in the operations display screen
- Warning light H 45 on the vehicle information unit (see diagram 25a).

Hydraulic oil level warning

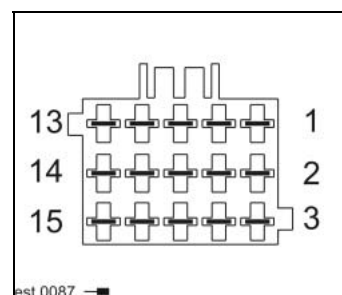
When the hydraulic oil level is too low, the hydraulic oil level (min.) actual value switch (Z19) closes. The hydraulic oil level (min.) signal light (H55) lights up.

Connector pin assignment:

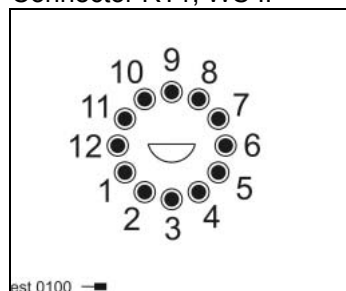
Connector FSAgr

Connector HKAbI,
KNAge, LSBgr, PVBge

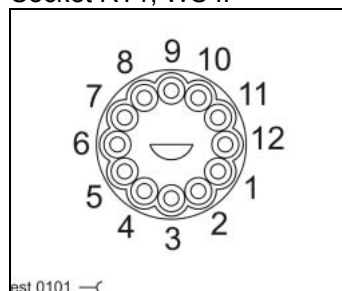
Connector LSAgr



Connector RT1, WS II



Socket RT1, WS II

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
FSAgr - 1	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
FSAgr - 2	LSA 6	KNA 8				0.75	br/wh
HKAbI - 7	LSB 9					0.75	bl/gr
HKAbI - 8	LSA 10					0.75	bl/or
HKAbI - 9	PVB 9	DI 2				0.75	wh/gn
HKAbI -10	PHA 3	PVA 20	b6a	BLA 14	KBA 4	0.75	bk
HKAbI -11	LSB 12					0.75	bl/bk
KNAge - 8	LSA 6	FSA 2				0.75	br/wh
LSAgr - 6	KNA 8	FSA 2				0.75	br/wh
LSAgr - 7	b2a					1.5	bk
LSAgr -10	HKA 8					0.75	bl/or

Interconnection list:

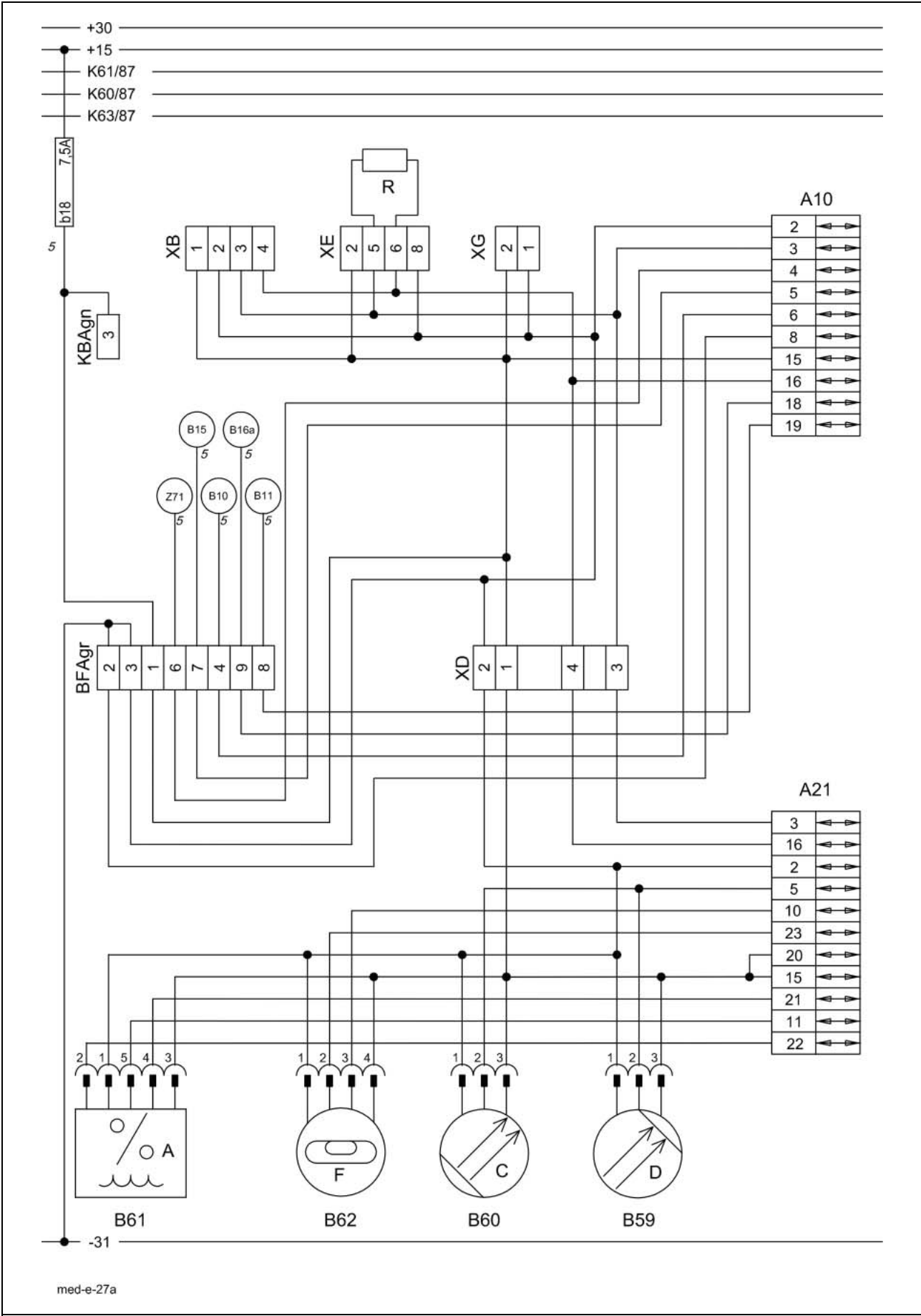
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSBgr - 9	HKA 7					0.75	bl/gr
LSBgr -10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr -12	HKA 11					0.75	bl/bk
PVBge - 7	a9a					0.5	bk
PVBge - 9	DI 2	HKA 9				0.75	wh/gn
PVBge -20	DZW 12					0.5	wh/gn
RT1 - 9						0.75	bl/gr
RT1 -10						1.5	br
RT1 -12						0.75	bl/bk
WS II - 4						0.75	br/wh
WS II - 5						1.5	bk
WS II - 8						0.75	bl/or

27a

Yield meter

- optional variant (Agrocom)

27a Yield meter



Key to diagram:

		Coordinates
A10	Fieldwork computer module (BIF/CAB)	4-g-17
A21	YIELD METER module (LEM)	4-j-16
A30	ACT terminal (no display, connected to connector XB)	
B10	Diesel engine speed sensor	5-i-20
B11	Threshing drum speed sensor	5-j-19
B15	Fan speed sensor	7-m-16
B16a	Transmission speed sensor (ground speed)	7-i-16
B59	YIELD METER (LEM) receiver sensor	4-n-16
B60	YIELD METER (LEM) transmitter sensor	4-n-16
B61	YIELD METER grain humidity sensor	2-n-17
B62	YIELD METER inclination sensor	7-i-18
R	Resistor (CAN matching resistor)	4-g-17
XB	Connecting plug for cabling of terminal A30 (docking station)	4-g-17
XD	Connecting plug of wiring looms (cab – machine)	4-j-16
XE	Connector for CAN terminal resistor (relay socket)	4-g-17
XG	Additional connector	4-g-17
Z71	Front attachment working position actual value switch	5-g-17

Measured value table:

Item	Component	Measured value	Remark
B10 B11 B15	Sensor	1000 - 1200 Ω	inductive
B16a	Sensor	I - 0	Reed contact
B59	Receiver	> 2.5 V ~ 1.2 V	with light incidence with shading
B60	Transmitter	12 V	Transmits infrared light
B61	Humidity sensor	7 V	Reference voltage (pin 4)
B62	Inclination sensor	30° - 0° - 30° 1.2 - 3.0 - 4.8 V	Conductive liquid

Description of function:**Yield measuring**

The yield measuring is based on flow rate measurement by the light barrier (B59/B60) inside the grain elevator, depending on transverse and longitudinal inclination of the machine. Based on these signals, the yield meter module (A21) calculates the yield and displays this information in terminal A30 via the CAN bus.

System calibration by entering the litre weight and by checking the values by counterweighing a defined grain quantity constitute important fundamentals for a precise calculation.

Humidity measurement

The measurements made by the humidity sensor (B61) are also displayed by the yield meter module (A21) in terminal A30 via the CAN bus, but are not used for calculating the gross weight.

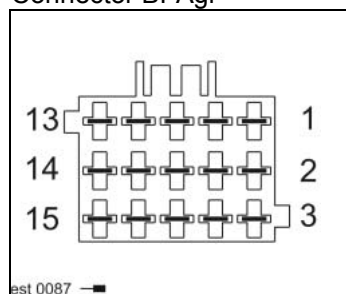
Terminal A30 requires these measured values for calculation only for stating the net weight in order processing.

Fieldwork computer functions

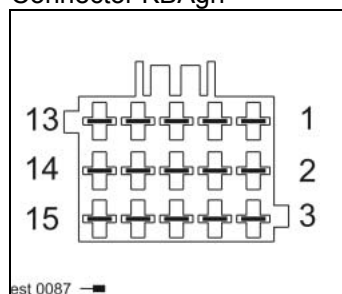
The signals from sensors B10, B11, B15 and B16a are entered into the fieldwork computer module (BIF/CAB) A10 and processed there. This module transmits the established information data to terminal A30 via the CAN bus.

Connector pin assignment:

Connector BFAGr



Connector KBAGr

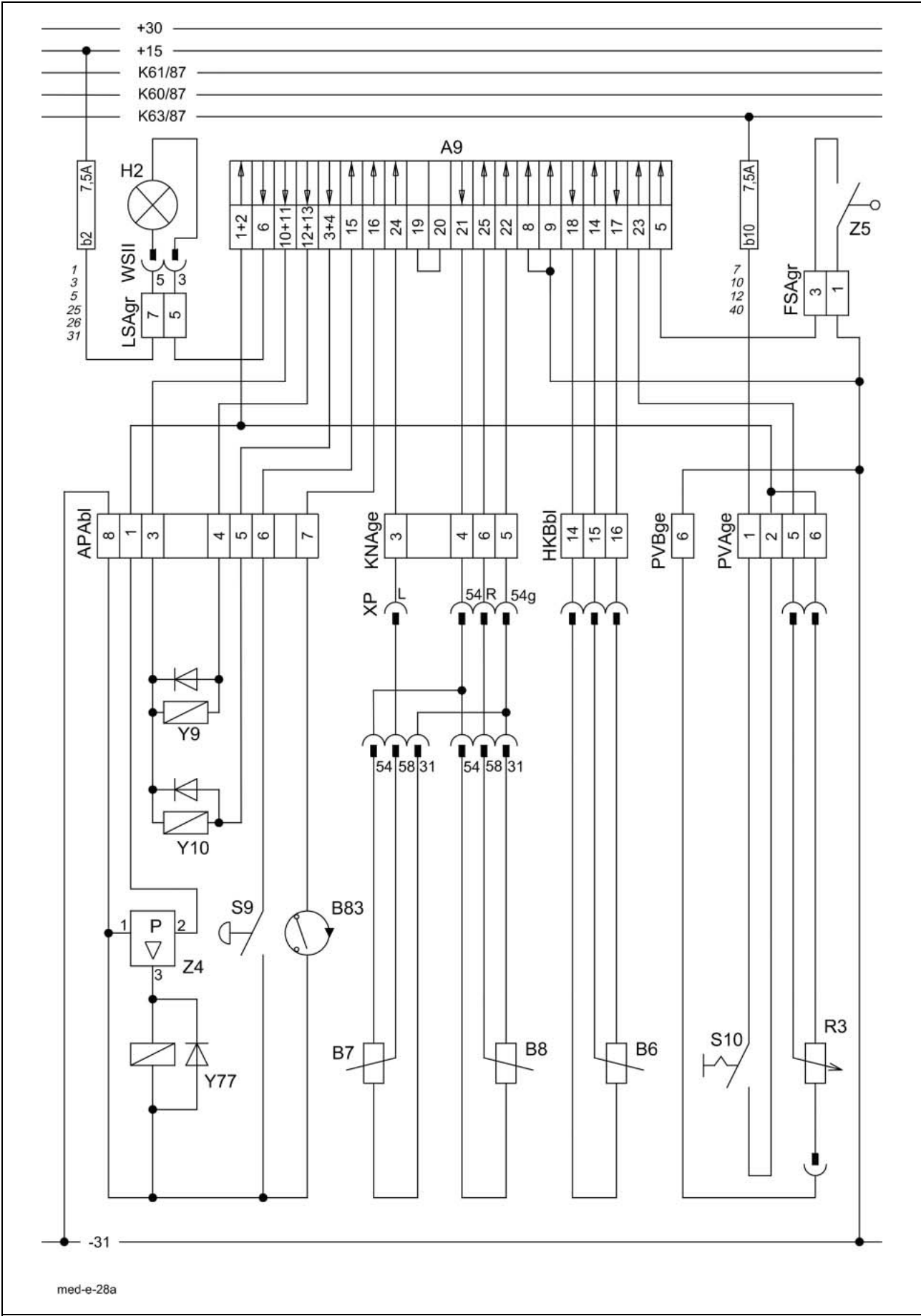
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BFAGr - 1	KBA3	b18a				0.5	bk
BFAGr - 3	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
BFAGr - 4	DZW 5	MOB 14				0.5	rd/ye
BFAGr - 6	KNB 14					0.5	rd/bl
BFAGr - 7	PVA 15	MOB 1	KNB 12			0.75	bk/vi
BFAGr - 8	PVA 16	HKA 20				0.5	bl/wh
BFAGr - 9	PVB 15	KNB 13				0.5	rd/bk

28a

AUTOPILOT

28a AUTOPILOT



Key to diagram:

		Coordinates
A9	AUTOPILOT module (ATP)	4-g-17
B 6	AUTOPILOT wheel angle sensor	8-q-19
B 7	AUTOPILOT left touch sensor	8-b-17
B 8	AUTOPILOT right touch sensor	8-b-19
B83	AUTOPILOT OFF sensor (override switch)	5-g-18
H2	AUTOPILOT signal light	3-g-18
K63	Threshing mechanism relay	4-g-17
R 3	AUTOPILOT centralizing switch potentiometer (set value)	4-g-17
S 9	AUTOPILOT ON switch	5-g-17
S10	AUTOPILOT main switch	4-g-17
Y 9	AUTOPILOT left solenoid coil	5-h-17
Y10	AUTOPILOT right solenoid coil	5-h-17
Y77	Circulation shut-off valve solenoid coil	5-h-16
Z4	AUTOPILOT oil pressure actual value switch	5-h-17
Z5	Seat contact actual value switch	4-h-18

Measured value table:

Item	Component	Measured value	Remark
B 6			
B 7	Pushbutton (analogue)	2.25 - 2.85 V	See Description of function
B 8	Angle sensor	2.25 - 2.85 V	See Description of function
R 3	Potentiometer	4.70 kΩ 1.7 - 6.4 kΩ	(Pin A-E) coil (Pin S-E) slider
Y 9	Solenoid coil	3.8 A	
Y10		3.2 Ω	
Y77			

Description of function:**AUTOPILOT function with sensor system**

With the road travel activation unlocked and the threshing mechanism engaged, the AUTOPILOT module A 9 is supplied with power via main switch S10. Following the start signal from foot switch S9, the solenoid coils Y9/Y10 are actuated, depending on the signals from the touch sensors B7/B8. The steering position is controlled by wheel angle sensor B 6.

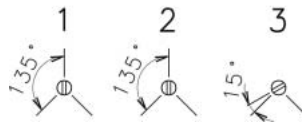
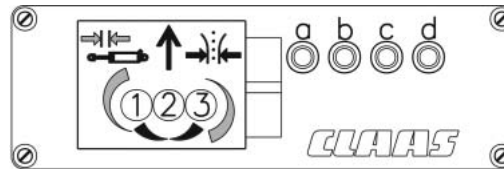
For safety reasons, the AUTOPILOT function is interrupted immediately by the signal from override switch Z3 when the steering wheel is turned manually or after approx. 5 seconds after leaving the operator's seat, by means of seat contact Z5.

The centralizing switch R3 allows setting precise straight forward travel even when driving on slopes.

To allow quick steering reactions during AUTOPILOT operation, the hydraulic system is equipped with an accumulator. If the pre-stress of this accumulator drops to below approx. 135 bar, the oil pressure switch Z4 triggers the circulation shut-off valve Y77 until a charging pressure of approx. 160 bar has again been reached.

Settings on the module

- a - Steering signal right
- b - Steering signal left
- c - Malfunction indicator
- d - Operation check



Lex2-062

Potentiometers**1 - Steering angle:**

At maximum steering angle by the system sensors, the steering cylinder stroke is set to 26-34 mm for both directions.

2 - Straight ahead travel:

Setting of straight ahead travel when centralizing switch is in neutral position.

3 - Response threshold:

The sensitivity of steering reactions is adapted to calm the system.

* The potentiometers (1, 2, 3) are shown here in their basic position.

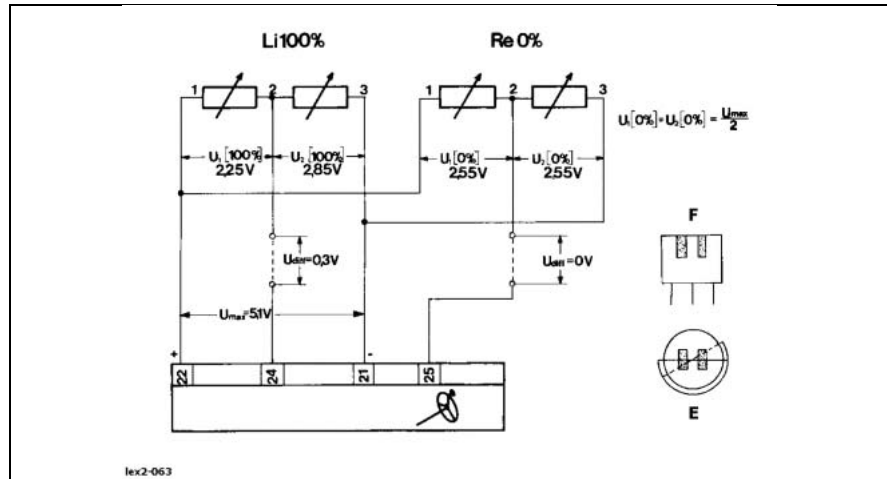
Description of function:

E - Iron core

F - Magnetoresistor

Voltage signals at sensor
pin 1-2 / 3-2:

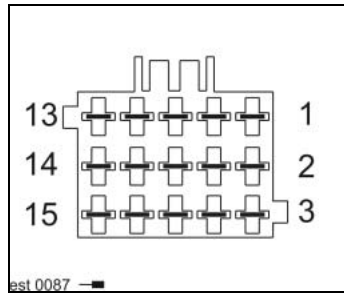
- Straight ahead - 2.55 V
- Max. path - 2.85 V
- Min. path - 2.25 V



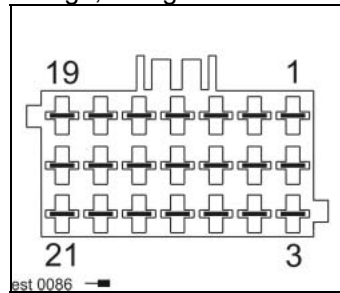
The electric magnetic field of the magnetoresistor (F) is crossed by the motion of the iron core (E), causing a voltage drop between pin 1-2 and/or pin 2-3. When in centre position, both semiconductors of the magnetic-field dependent resistor (F) are equally covered which is registered by the AUTOPILOT module as an identical voltage drop of **2.55 V** on each side. As a function of iron core (E) twisting, a voltage difference of up to **0.3 V** results between pin 1-2 and pin 2-3 which signals the steering angle to the AUTOPILOT module.

Connector pin assignment:

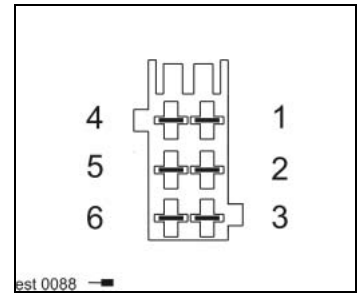
Connector APAbI, LSAgr



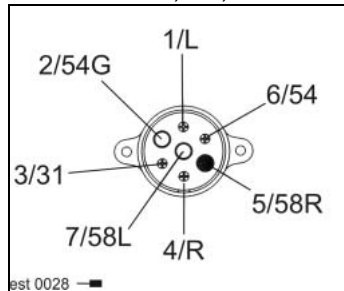
Connector HKBbI, KNAge, PVAge, PVBge



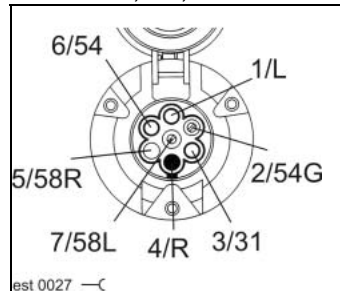
Connector FSAge



Connector B7, B8, XP



Socket B7, B8, XP



Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
APAbI - 1	PVA 2	PVA 6	AP 1	AP 2		1.5	gn/rd
APAbI - 3	AP 11	AP 10				1.5	bk
APAbI - 4	AP 13	AP 12				1.5	bk/ye
APAbI - 5	AP 4	AP 3				1.5	gn
APAbI - 6	AP 15					0.75	bk/wh
APAbI - 7	AP 16					0.75	bk/vi
APAbI - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
FSAge - 1	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
FSAgr - 3	PVA 3	AP 5				0.75	br/vi
HKBbI - 14	AP 18					0.75	rd/bk
HKBbI - 15	AP 14					0.75	rd/ye
HKBbI - 16	AP 17					0.75	rd/bl
KNAge - 3	AP 24					1	bk/gn
KNAge - 4	AP 21					1	bk/bl
KNAge - 5	AP 22					1	bk/rd
KNAge - 6	AP 25					1	bk/ye

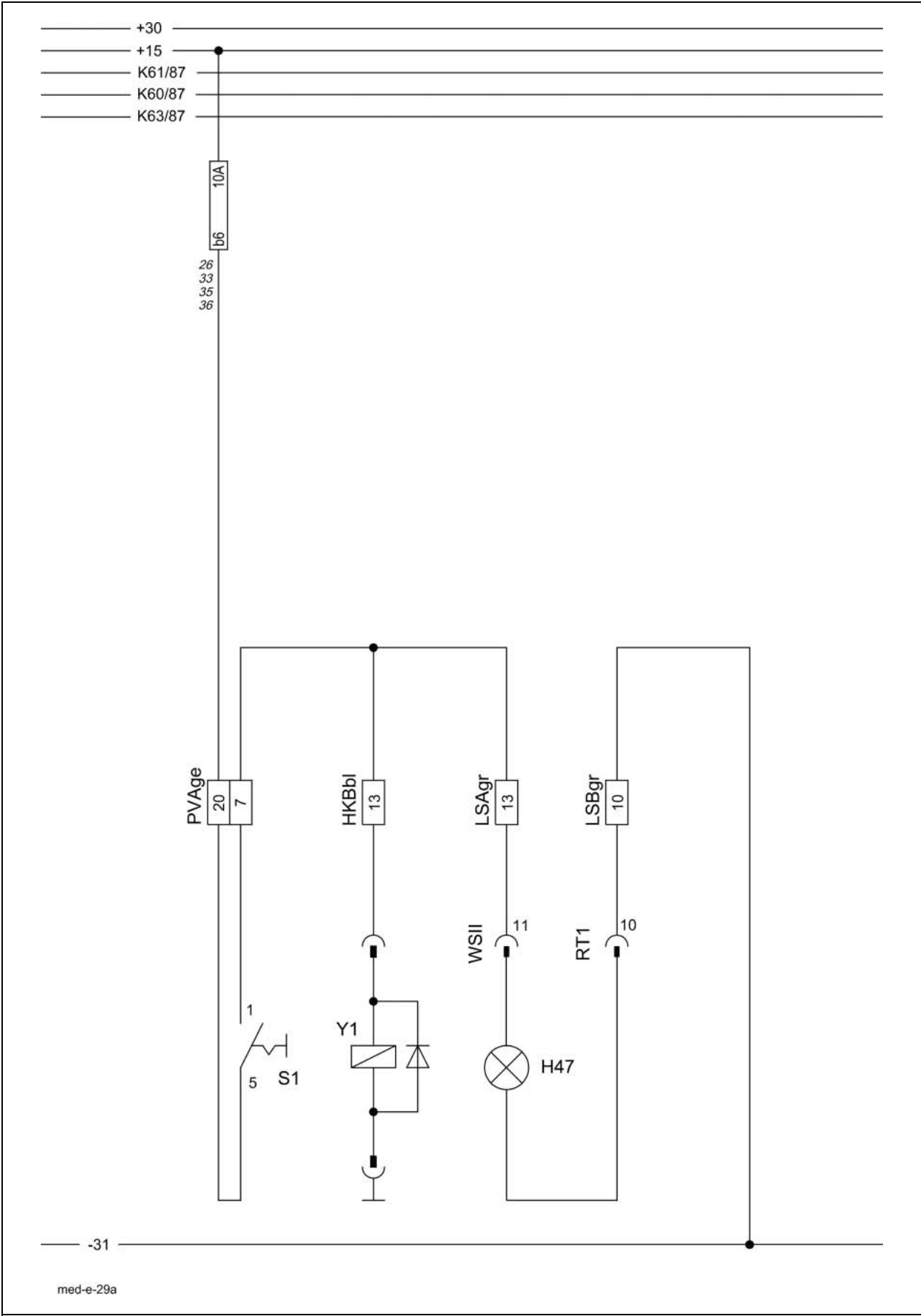
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSAgr - 5	AP 6					0.5	gr/bl
LSAgr - 7	b2a					1.5	bk
PVAge - 1	PHA 15	b10a	MOA 1	K71/86	K72/86	1.5	bk/gr
PVAge - 2	PVA 6	AP 1	AP 2	APA 1		1.5	ye/bl
PVAge - 5	AP 23					0.5	pi
PVAge - 6	PVA 2	AP 1	AP 2	APA 1		0.5	ye/bl
PVBge - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
WS II - 3						0.5	gr/bl
WS II - 5						1.5	bk
XP - L						1.0	bk/gn
XP - R						1.0	bk/ye
XP - 54						1.0	bk/bl
XP - 54g						1.0	bk/rd

29a

All-wheel drive

29a All-wheel drive



Key to diagram:

		Coordinates
S 1	4-Trac (all-wheel drive) switch	4-g-17
Y 1	4-Trac (all-wheel drive) solenoid coil	8-p-18
H47	4-Trac (all-wheel drive) signal light	3-g-18

Measured value table:

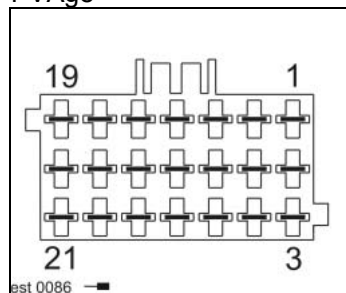
Item	Component	Measured value	Remark
Y 1	Solenoid coil	4.0 A 3.0 Ω	

Description of function:

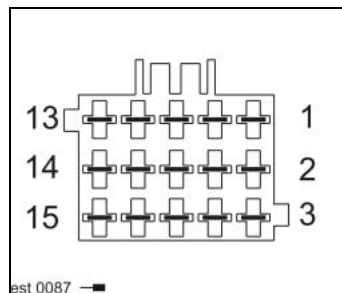
None

Connector pin assignment:

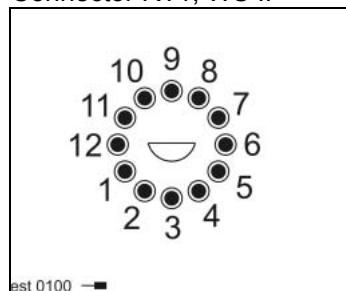
Connector HKBbl, LSBgr, PVAge



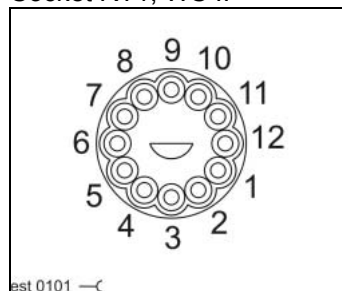
Connector LSAgr



Connector RT1, WS II



Socket RT1, WS II

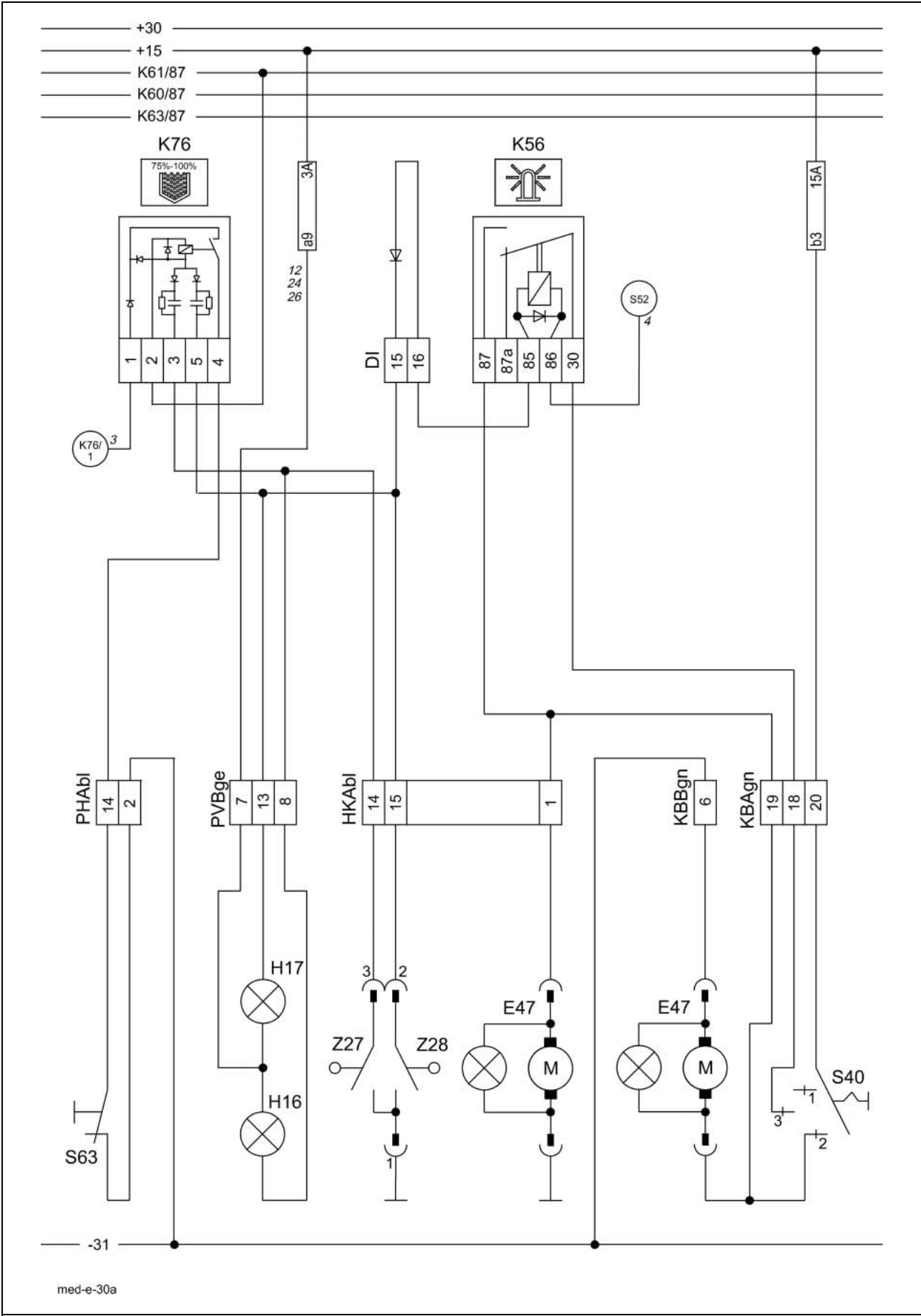
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 13	PVA 7	LSA 13				1.5	gn/rd
LSAgr - 13	PVA 7	HKB13				0.5	gn/rd
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PVAge - 7	LSA 13	HKB13				1.5	gn/rd
PVAge - 20	PHA 3	KBA4	b6a	BLA 14	HKA 10	1.5	bk
RT1 - 10						1.5	br
WS II - 11						0.5	gn/rd

30a

**Grain tank full indicator /
warning beacon**

30a Grain tank full indicator / warning beacon



Key to diagram:

		Coordinates
DI	Diode PCB	4-g-17
E47	Warning beacon	3-u-18
H16	Grain tank filling level 100% signal light	4-g-17
H17	Grain tank filling level 70% signal light	4-g-17
K56	Warning beacon relay	4-g-17
K61	Generator release relay	4-g-17
K76	Grain tank full sensor relay	4-g-17
S40	Warning beacon switch	4-g-17
S52	Road travel switch (red)	4-g-17
S63	Warning tone delete switch	4-g-17
Z27	Grain tank 100% full indicator	4-h-18
Z28	Grain tank 70% full indicator	4-h-18

Measured value table:

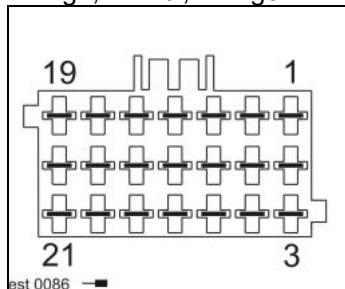
Item	Component	Measured value	Remark
K56	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
K76	Electronic relay	---	

Description of function:

Grain tank 70% full indicator	<p>When pressing microswitch Z28, warning light H17 lights up permanently on the one hand, on the other hand the buzzer is activated in a pulsed way by relays K76 and K58. K76 now remains locked in which can only be stopped by actuating switch S63.</p> <p>The switch position II of function switch S40 (warning beacon) allows linking the warning beacons to the grain tank 70% full indicator.</p>
Grain tank 100% full indicator	<p>When pressing microswitch Z27, warning light H16 lights up permanently on the one hand, on the other hand the buzzer is activated in a pulsed way by relays K76 and K58. K76 now remains locked in which can only be stopped by actuating switch S63.</p>
Warning beacons circuit	<p>The switch position I of function switch S40 (warning beacon) allows activating the warning beacons permanently.</p> <p>The switch position II allows linking the warning beacons to the grain tank 70% full indicator.</p>

Connector pin assignment:

Connector HKAbI, KBAGn, KBBgn, PHAbI, PVBge

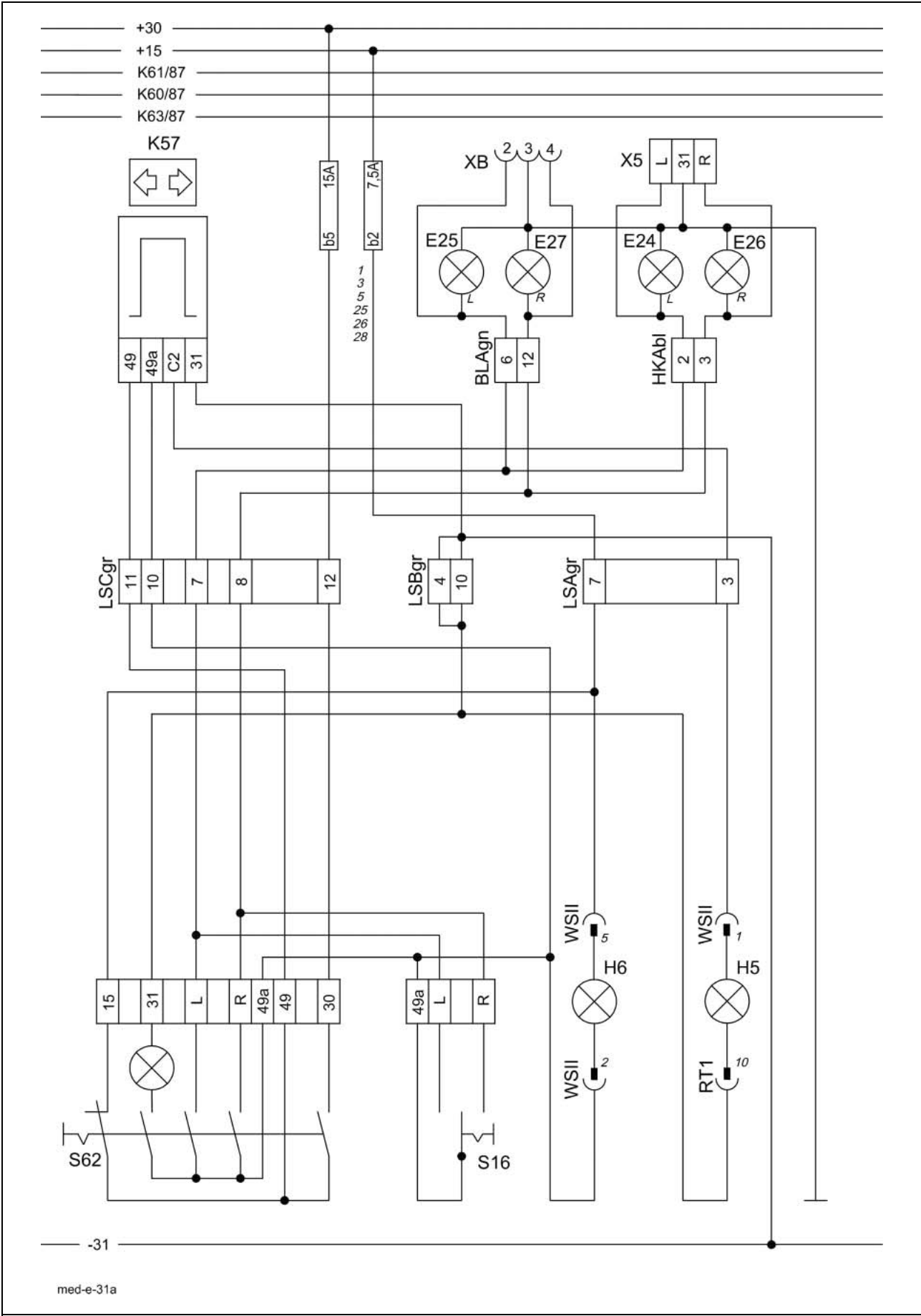
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKAbI - 1	KBA19	K56/87				1.5	wh/vi
HKAbI - 14	PVB 8	K76/3				0.75	ye/gn
HKAbI - 15	PVB 13	K76/5	DI 15			0.75	wh/gr
KBAgn - 18	K56/30					1.5	bk/gn
KBAgn - 19	K56/87	HKA 1				1.5	wh/vi
KBAgn - 20	b3a					1.5	bk/vi
KBBgn - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PHAbI - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PHAbI - 14	K76/4					0.5	br/vi
PVBge - 7	a9a					0.5	bk
PVBge - 8	HKA 14	K76/3				0.75	ye/gn
PVBge - 13	HKA 15	K76/5	DI 15			0.75	wh/gr

31a

Turn flasher system

31a Turn flasher system



Key to diagram:

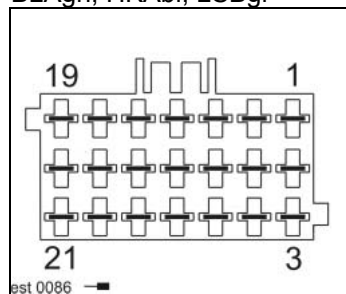
		Coordinates
E24	Turn flasher, rear left	6-u-21
E25	Turn flasher, front left	5-g-19
E26	Turn flasher, rear right	6-u-15
E27	Turn flasher, front right.....	5-g-17
H 5	Trailer turn flasher signal light.....	3-g-18
H 6	Vehicle turn flasher signal light	3-g-18
K57	Transducer.....	4-g-17
S16	Turn flasher switch.....	3-g-18
S62	Hazard warning flasher switch	3-g-18
X5	Connector	5-o-17
XB	Connector	5-g-17

Measured value table:

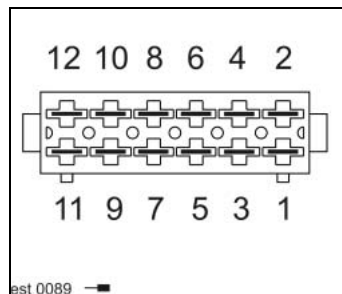
Item	Component	Measured value	Remark
K57	Transducer	---	

Description of function:

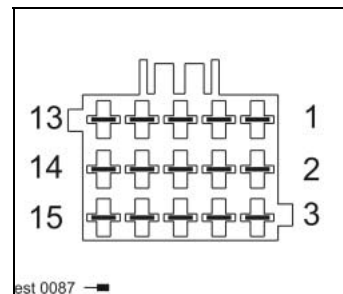
None

Connector pin assignment:Connector
BLAgn, HKAbI, LSBgr

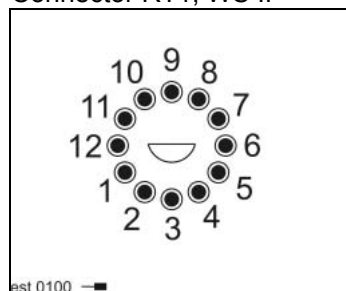
Connector LSCgr



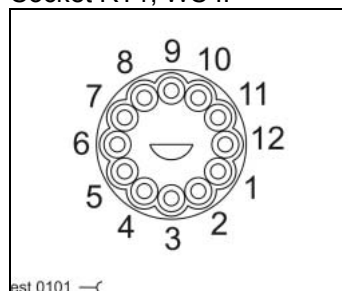
Connector LSAgr



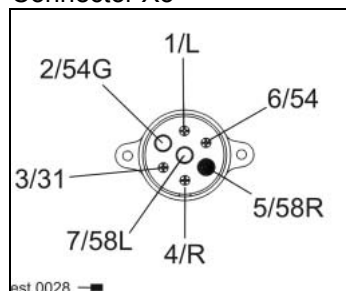
Connector RT1, WS II



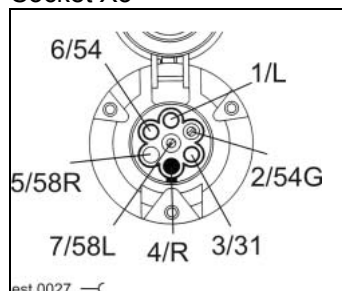
Socket RT1, WS II



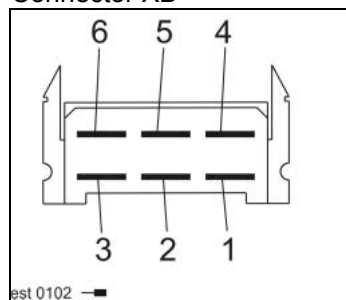
Connector X5



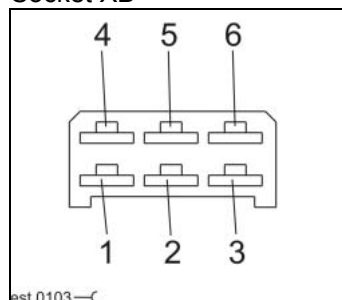
Socket X5



Connector XB



Socket XB



Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 6	LSC 7	HKA 2				1.5	bk/wh
BLAgn - 12	LSC 8	HKA 3				1.5	bk/gn
HKAbl - 2	LSC 7	BLA 6				1.5	bk/wh
HKAbl - 3	LSC 8	BLA 12				1.5	bk/gn
LSAgr - 3	K57/C2					0.5	bl/rd
LSAgr - 7	b2a					1.5	bk
LSBgr - 4	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSCgr - 7	BLA 6	HKA 2				1.5	bk/wh
LSCgr - 8	HKA 3	BLA 12				1.5	bk/gn
LSCgr - 10	K57/49a					2.5	wh/gn
LSCgr - 11	K57/49					2.5	bk/rd
LSCgr - 12	b5a					2.5	rd

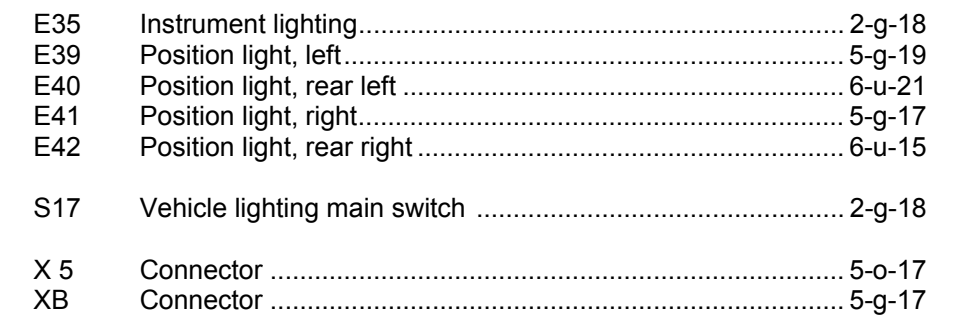
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
RT1 - 10						1.5	br
WS II - 1						0.5	bl/rd
WS II - 2						1.5	wh/gn
WS II - 5						1.5	bk
WS II - 10						0.5	or
X 5 - L						1.5	bk/wh
X 5 - R						1.5	bk/gn
X 5 - 31						1.5	br
XB - 2						1.5	bk/wh
XB - 3						1.5	br
XB - 4						1.5	bk/gn

32a

Main light circuit, position light

Key to diagram:

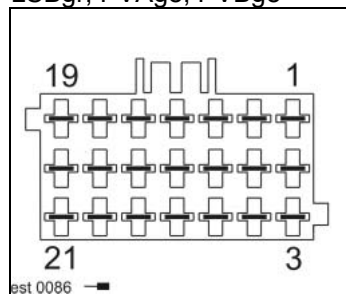


Description of function:

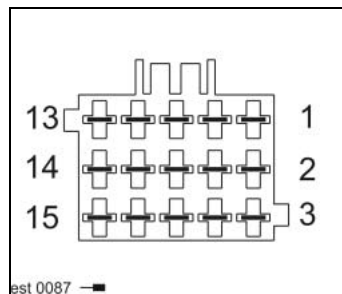
None

Connector pin assignment:

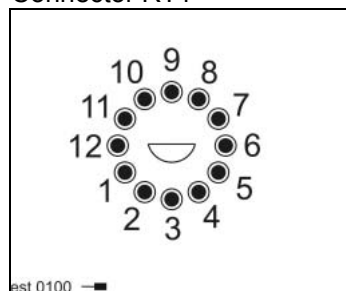
Connector BLAgn, HKAbI, LSBgr, PVAge, PVBge



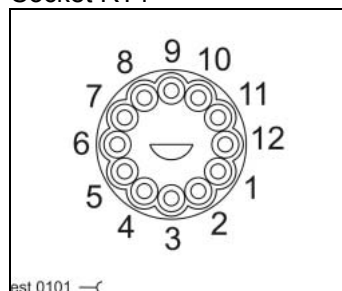
Connector KBBgn



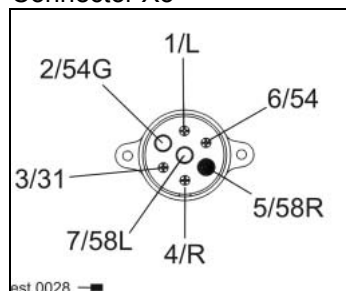
Connector RT1



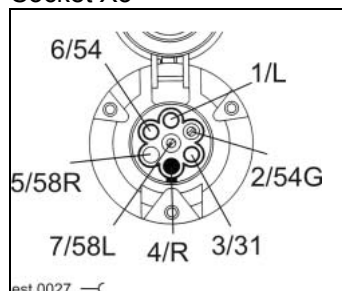
Socket RT1



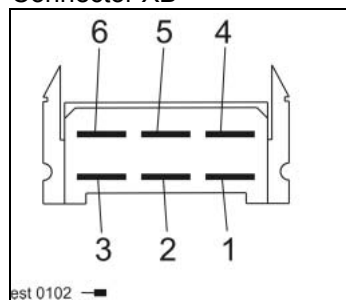
Connector X5



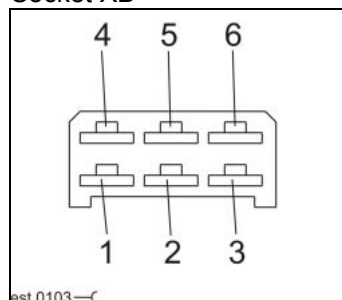
Socket X5



Connector XB



Socket XB



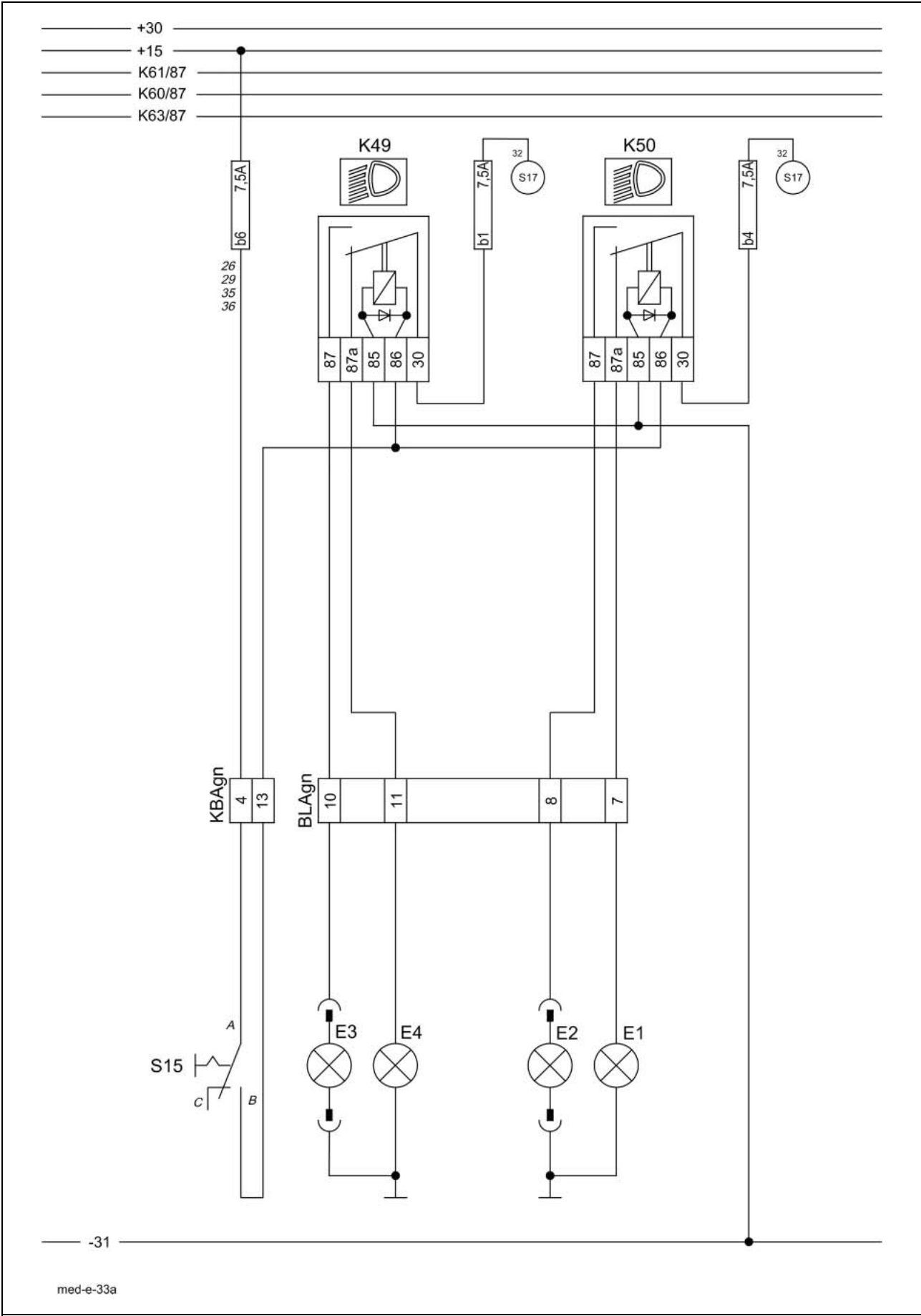
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 5	HKA 5	a7a				1.5	gr/bk
BLAgn - 13	HKA 4	a10a				1.5	gr/rd
HKAbl - 4	BLA 13	a10a				1.5	gr/rd
HKAbl - 5	BLA 5	a7a				1.5	gr/bk
KBBgn - 1	a5a					2.5	rd/bl
KBBgn - 2	b1e	b4e				2.5	rd/ye
KBBgn - 4	a13e	a10e	a7e			2.5	gr
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr - 11	PVA 18	a13a				0.5	gr/gn
PVAge - 18	LSB 11	a13a				0.5	gr/gn
PVBge - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	0.75	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
RT1 - 11						0.5	gr/gn
RT1 - 12						0.75	bl/bk
X 5 - 31						1.5	br
X 5 - 58L						1.5	gr/bk
X 5 - 58R						1.5	gr/rd
XB - 1						1.5	gr/bk
XB - 3						1.5	br
XB - 5						1.5	gr/rd

33a

**Dipped headlights,
dipped headlights changeover**

33a Dipped headlights, dipped headlights changeover



Key to diagram:

		Coordinates
E 1	Dipped headlights, left	5-f-19
E 2	Dipped headlights, top left	2-e-19
E 3	Dipped headlights, top right	2-e-17
E 4	Dipped headlights, right	5-f-17
K49	Dipped headlights relay	4-g-17
K50	Dipped headlights relay	4-g-17
S15	Dipped headlights changeover switch	2-g-18
S17	Vehicle lighting main switch	2-g-18

Measured value table:

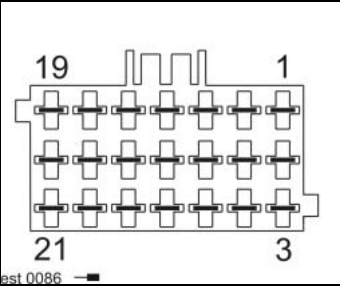
Item	Component	Measured value	Remark
K49	Remote control relay	95±10 Ω	(Pin 85 - Pin 86)
K50		15 A	(Pin 30 - Pin 87a)
		30 A	(Pin 30 - Pin 87)

Description of function:

None

Connector pin assignment:

Connector BLAgn, KBAGn



Interconnection list:

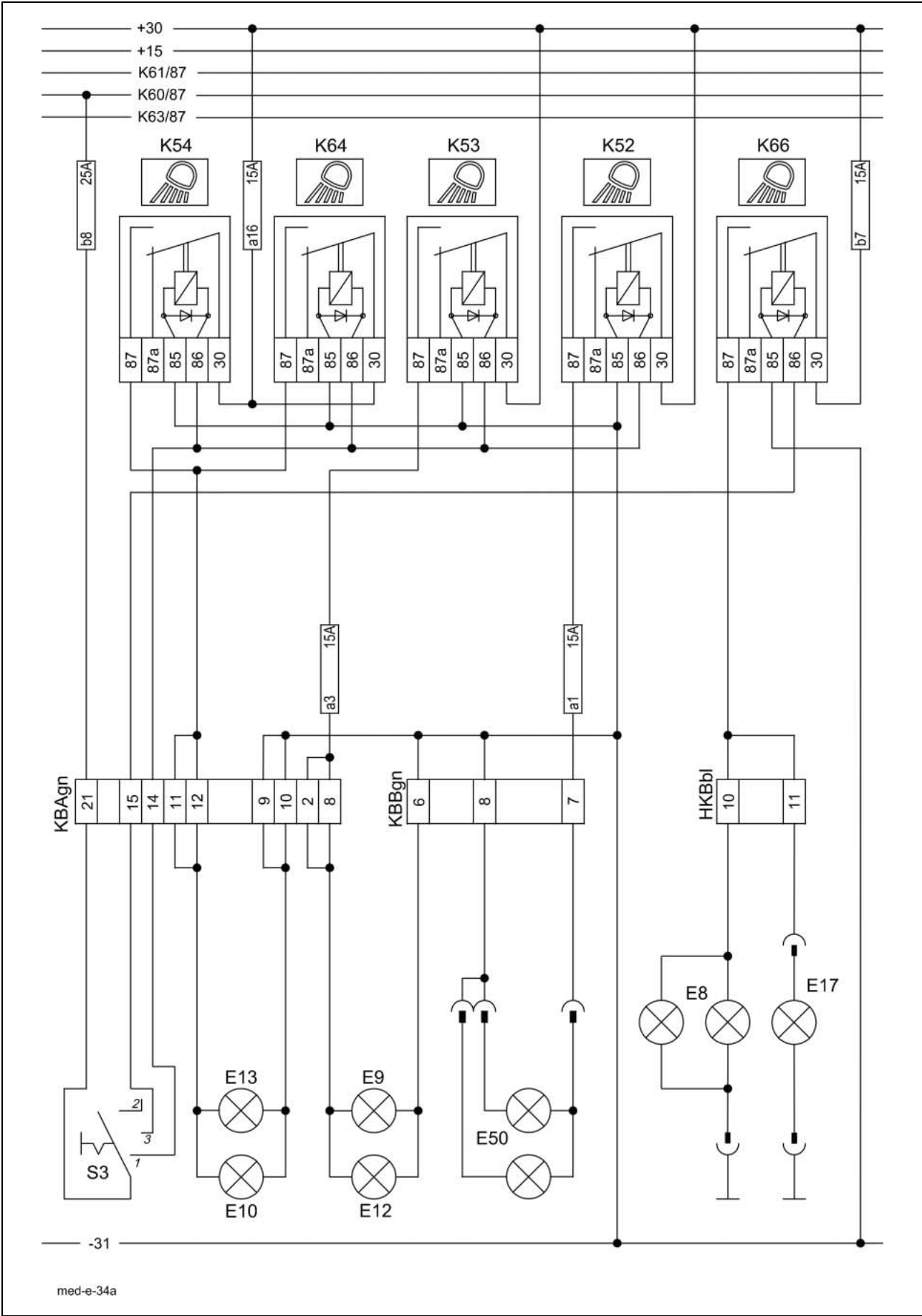
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 7	K50/87a					1.5	ye/br
BLAgn - 8	K50/87					1.5	ye/bk
BLAgn - 10	K49/87a					1.5	ye/rd
BLAgn - 11	K49/87a					1.5	ye/gr
KBAgn - 4	PHA 3	PVA 20	b6a	BLA 14	HKA 10	1.5	bk
KBAgn - 13	K49/86	K50/86				0.75	wh/bl

34a

Work lights

- up to serial no. 835 00146
845 00123

34a Work lights
up to serial no. 835 00146, 845 00123



Key to diagram:

		Coordinates
E 8	Rear work lights	3-u-17/19
E 9	Cab left outside work lights	2-e-19
E10	Cab left inside work lights	2-e-18
E12	Cab right outside work lights	2-e-18
E13	Cab right inside work lights	2-e-18
E17	Grain tank unloading tube work light	3-e-19
E50	Left parking light	5-f-19/17
K52	Work lights far relay	4-g-17
K53	Right-hand cab work light relay	4-g-17
K54	Left-hand cab work light relay	4-g-17
K60	Road travel release relay	4-g-17
K64	Work light relay	4-g-17
K66	Tail light relay	4-g-17
S 3	Work lights main switch	2-g-18

Measured value table:

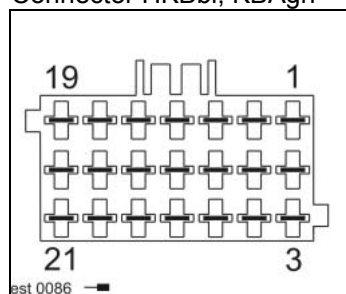
Item	Component	Measured value	Remark
K52 K53 K54 K64	Remote control relay	95±10 Ω 15 A 30 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
K66	Remote control relay	85± 7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)

Description of function:

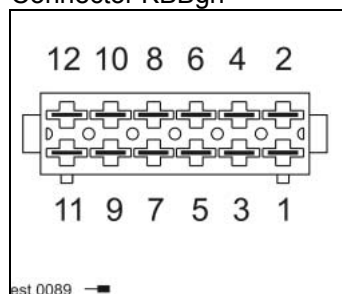
None

Connector pin assignment:

Connector HKBbl, KBAGn



Connector KBBgn

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 10	K66/87	HKB11				1.5	gr/wh
HKBbl - 11	K66/87	HKB10				0.75	gr/ye
KBAGn - 2	a3a	KBA8				1.5	gr/gn
KBAGn - 9	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBAGn - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBAGn - 11	a16a	KBA12				1.5	gr/ye
KBAGn - 12	K64/87	KBA12				1.5	gr/ye
KBAGn - 14	K52/86	K53/86	K54/86			0.75	gr/or
KBAGn - 15	K66/86					0.75	gr/vi
KBAGn - 21	b8a					0.75	bk/ye

Interconnection list:

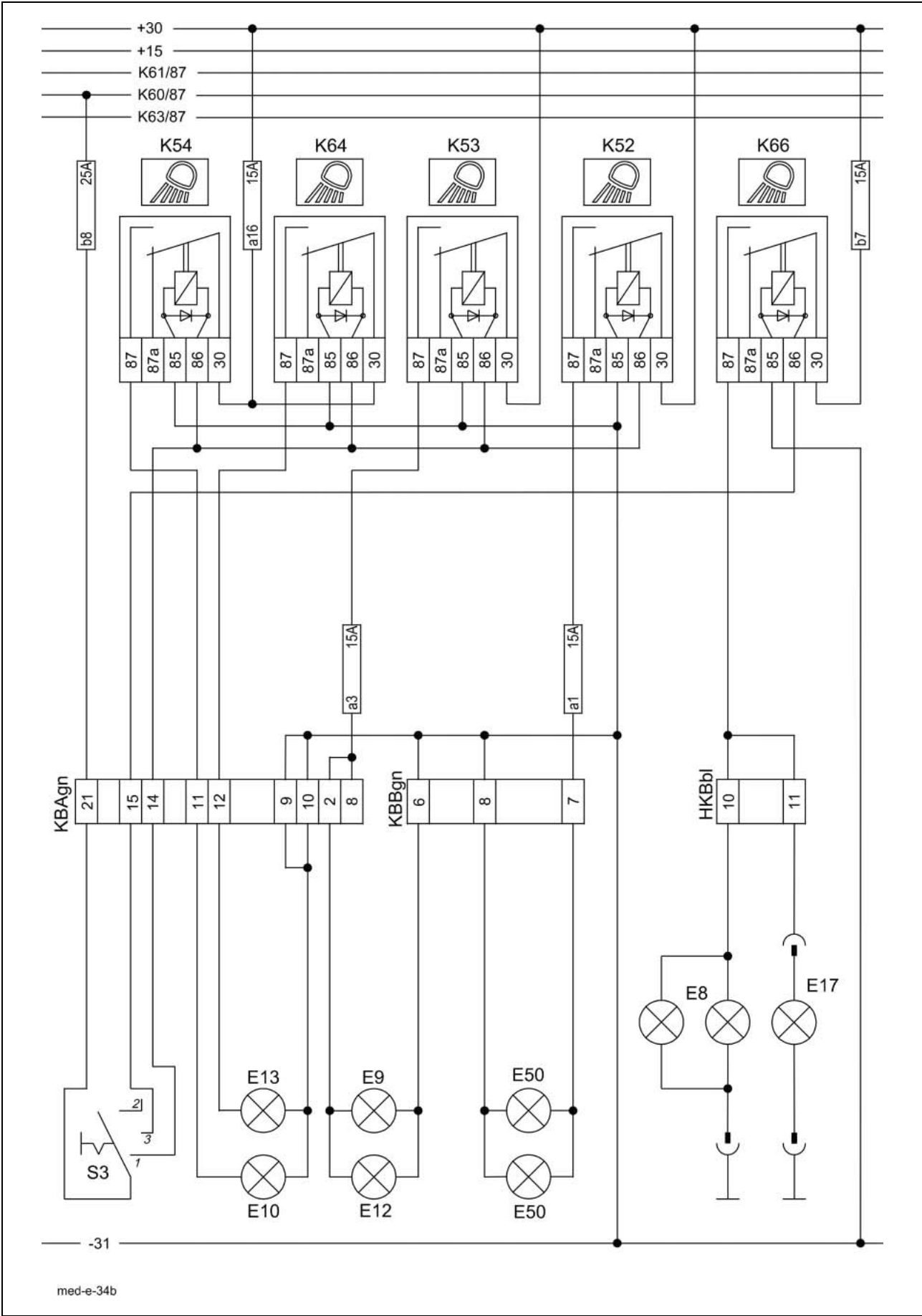
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KBBgn - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBBgn - 7	a1a					1.5	gr/bl
KBBgn - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

34b

Work lights

- from serial no. 835 00147
845 00124

34b Work lights
from serial no. 835 00147 845 00124



Key to diagram:

		Coordinates
E8	Rear work lights.....	3-u-17/19
E9	Cab left outside work lights	2-e-19
E10	Cab left inside work lights.....	2-e-18
E12	Cab right outside work lights	2-e-18
E13	Cab right inside work lights	2-e-18
E17	Grain tank unloading tube work light.....	3-e-19
E50	Left parking light	5-f-19/17
K52	Work lights far relay.....	4-g-17
K53	Right-hand cab work light relay	4-g-17
K54	Left-hand cab work light relay	4-g-17
K60	Road travel release relay	4-g-17
K64	Work lights relay	4-g-17
K66	Tail light relay	4-g-17
S 3	Work lights main switch	2-g-18

Measured value table:

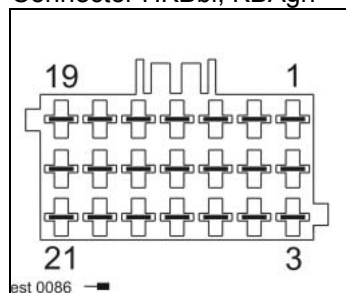
Item	Component	Measured value	Remark
K52	Remote control relay	95±10 Ω	(Pin 85 - pin 86)
K53		15 A	(Pin 30 - pin 87a)
K54		30 A	(Pin 30 - pin 87)
K66	Remote control relay	85± 7 Ω	(Pin 85 - pin 86)
		20 A	(Pin 30 - pin 87a)
		40 A	(Pin 30 - pin 87)

Description of function:

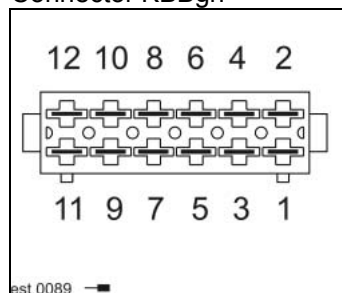
None

Connector pin assignment:

Connector HKBbl, KBAGn



Connector KBBgn

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKBbl - 10	K66/87	HKB 11				1.5	gr/wh
HKBbl - 11	K66/87	HKB 10				0.75	gr/ye
KBAGn - 2	a3a	KBA 8				1.5	gr/gn
KBAGn - 9	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBAGn - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBAGn - 11	a16a	KBA 12				1.5	gr/ye
KBAGn - 12	K64/87	KBA 12				1.5	gr/ye
KBAGn - 14	K52/86	K53/86	K54/86			0.75	gr/or
KBAGn - 15	K66/86					0.75	gr/vi
KBAGn - 21	b8a					0.75	bk/ye

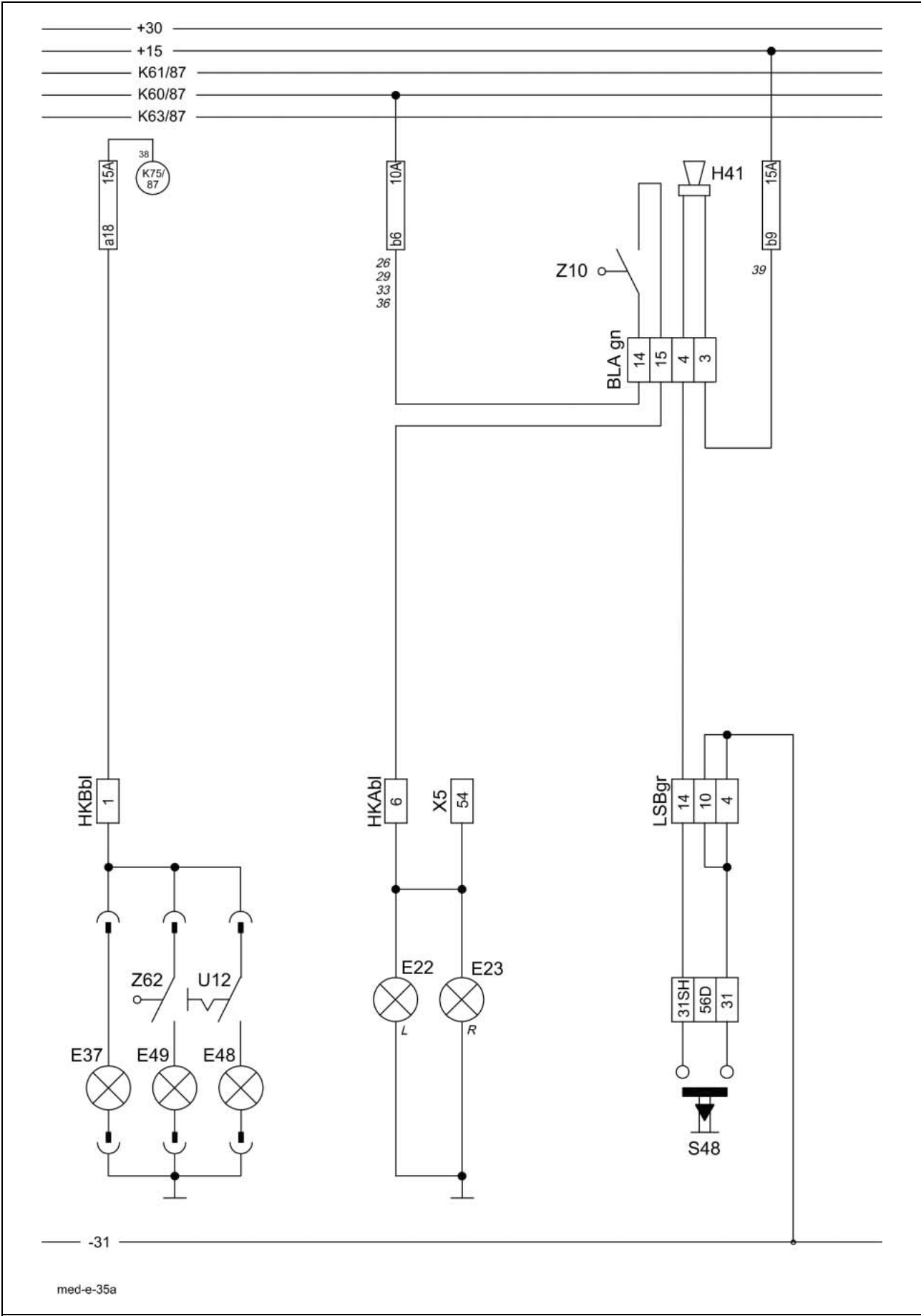
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KBBgn - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBBgn - 7	a1a					1.5	gr/bl
KBBgn - 8	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA 17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA 10	K54/85	ZGA 3	KBA 5		
	KBA 9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

35a

**Grain tank,
sieve pan and returns lighting,
reversing horn, brake light**

35a Grain tank, sieve pan and returns lighting, reversing horn, brake light



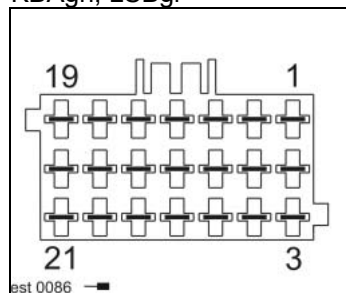
Key to diagram:		Coordinates
E22	Left brake light	6-u-21
E23	Right brake light	6-u-15
E37	Grain tank lighting	3-k-18
E48	Sieve pan lighting	4-s-16
E49	Returns lighting	4-i-16
H41	Reversing horn	5-g-18
K75	Additional power supply relay	4-g-17
S48	Switch	3-g-18
U12	Sieve pan lighting switch (external)	4-s-16
Z10	Brake light actual value switch	5-g-18
Z62	Returns lighting actual value switch	4-i-16

Description of function:

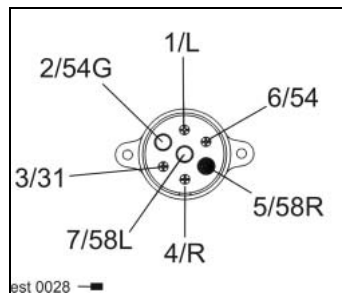
None

Connector pin assignment:

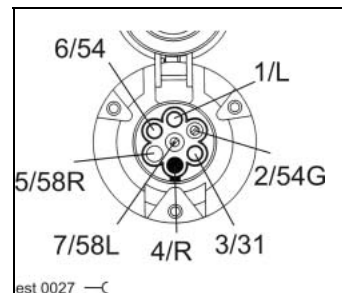
Connector BLAgn, HKAbI, KBAgn, LSBgr



Connector X5



Socket X5

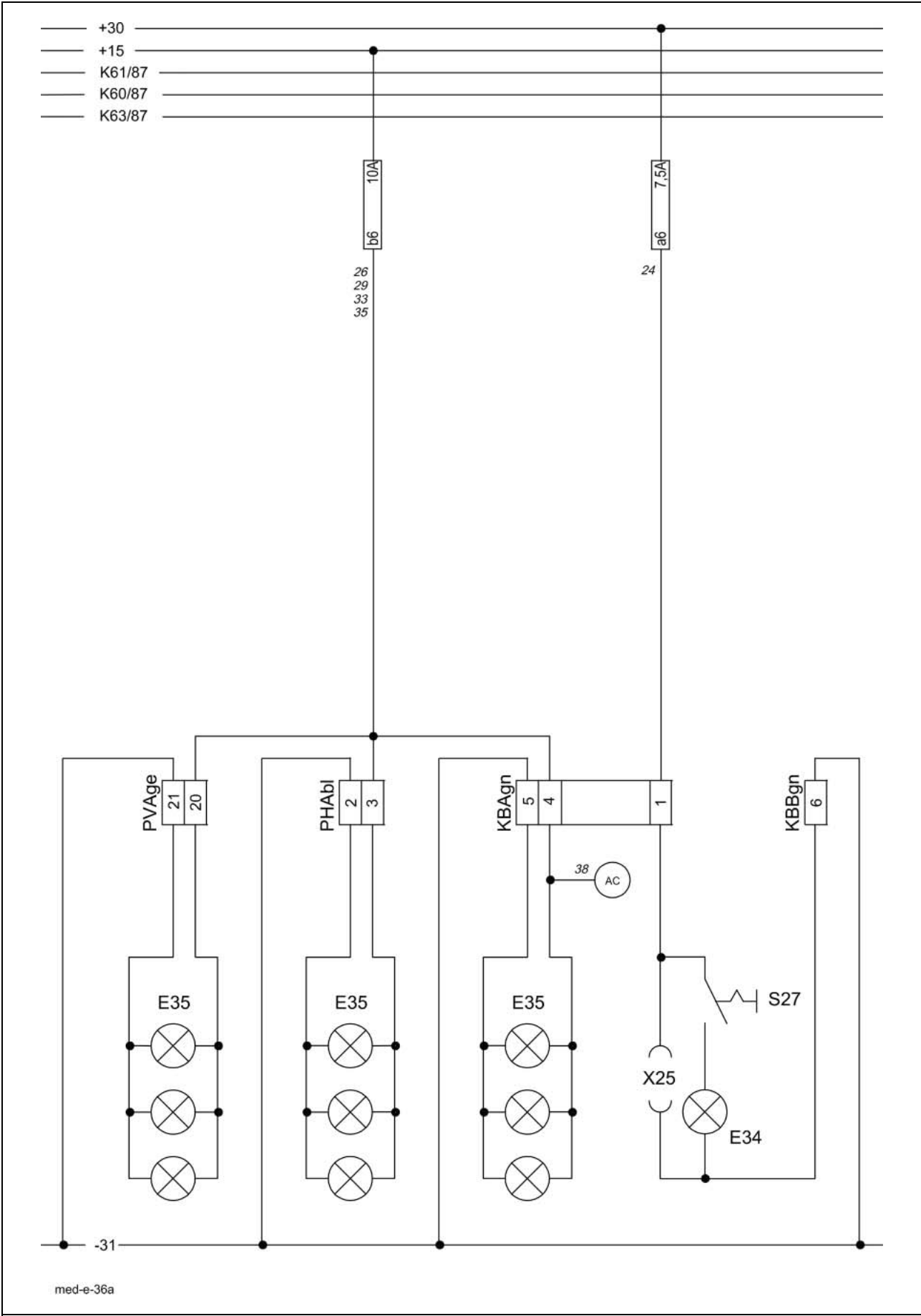
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
BLAgn - 3	FSA 4	b9a				1.5	bk
BLAgn - 4	LSB 14					1.5	br/ye
BLAgn - 14	PHA 3	PVA 20	b6a	HKA 10	KBA4	1.5	bk
BLAgn - 15	HKA 6					1.5	bk/rd
HKAbI - 6	BLA 15					1.5	bk/rd
KBAgn - 1	CAC 18	a6a				1.5	rd
LSBgr - 4	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr - 10	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSBgr - 14	BLA 4					1.5	br/ye
X5 - 54						1.5	bk/rd

36a

**Interior lights,
instrument lighting**

36a Interior lights, instrument lighting



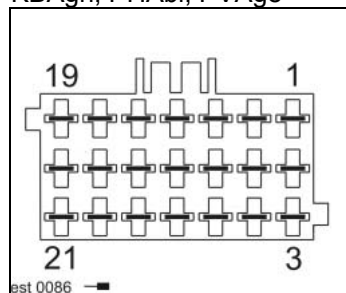
Key to diagram:		Coordinates
E34	Interior lights	2-g-17
E35	Instrument lighting.....	4-g-17
S27	Interior lights switch	2-g-17
X25	Plug-in connection for radio set, wireless radio and mirror adjustment.....	2-f-18

Description of function:

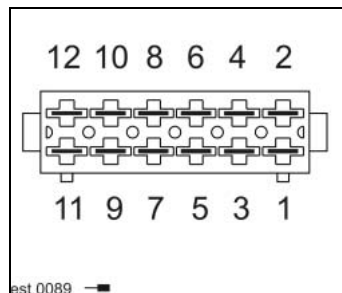
None

Connector pin assignment:

Connector
KBAgn, PHAbl, PVAge



Connector KBBgn

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
KBAgn - 1	CAC 18	a6a				1.5	rd
KBAgn - 4	PHA 3	PVA 20	b6a	BLA 14	HKA 10	1.5	bk
KBAgn - 5	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
KBBgn - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

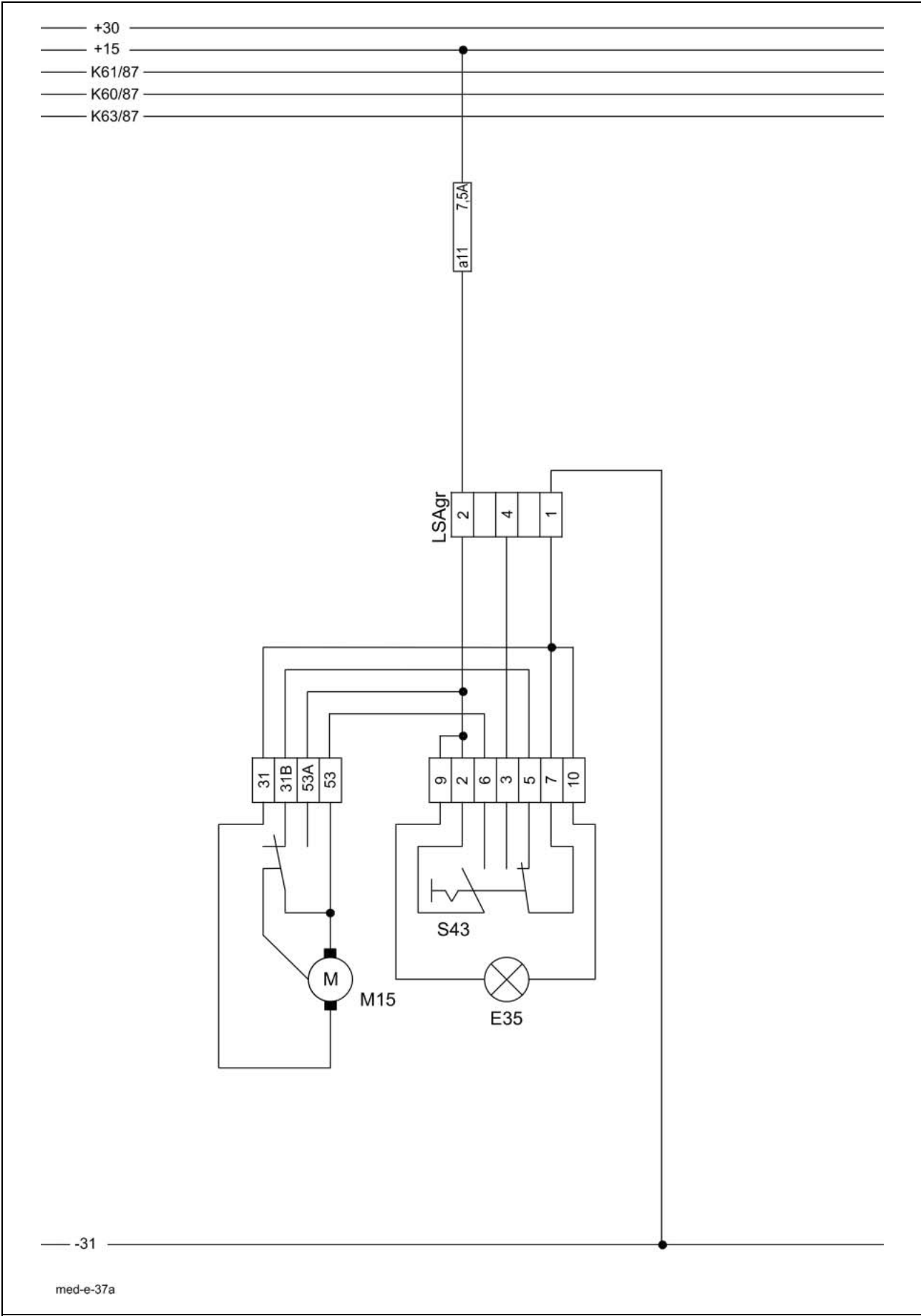
Interconnection list:

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PHAbI - 2	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
PHAbI - 3	PVA 20	b6a	BLA 14	HKA 10	KBA4	1.5	bk
PVAge - 20	b6a	BLA 14	HKA 10	KBA4	PHA 3	1.5	bk
PVAge - 21	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

37a

Windscreen wiper

37a Windscreen wiper



Key to diagram:

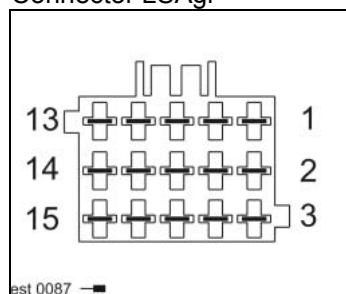
		Coordinates
E35	Instrument lighting.....	3-g-18
S43	Windscreen wiper switch	3-g-18
M15	Windscreen wiper motor	4-f-18

Description of function:

None

Connector pin assignment:

Connector LSAgr

**Interconnection list:**

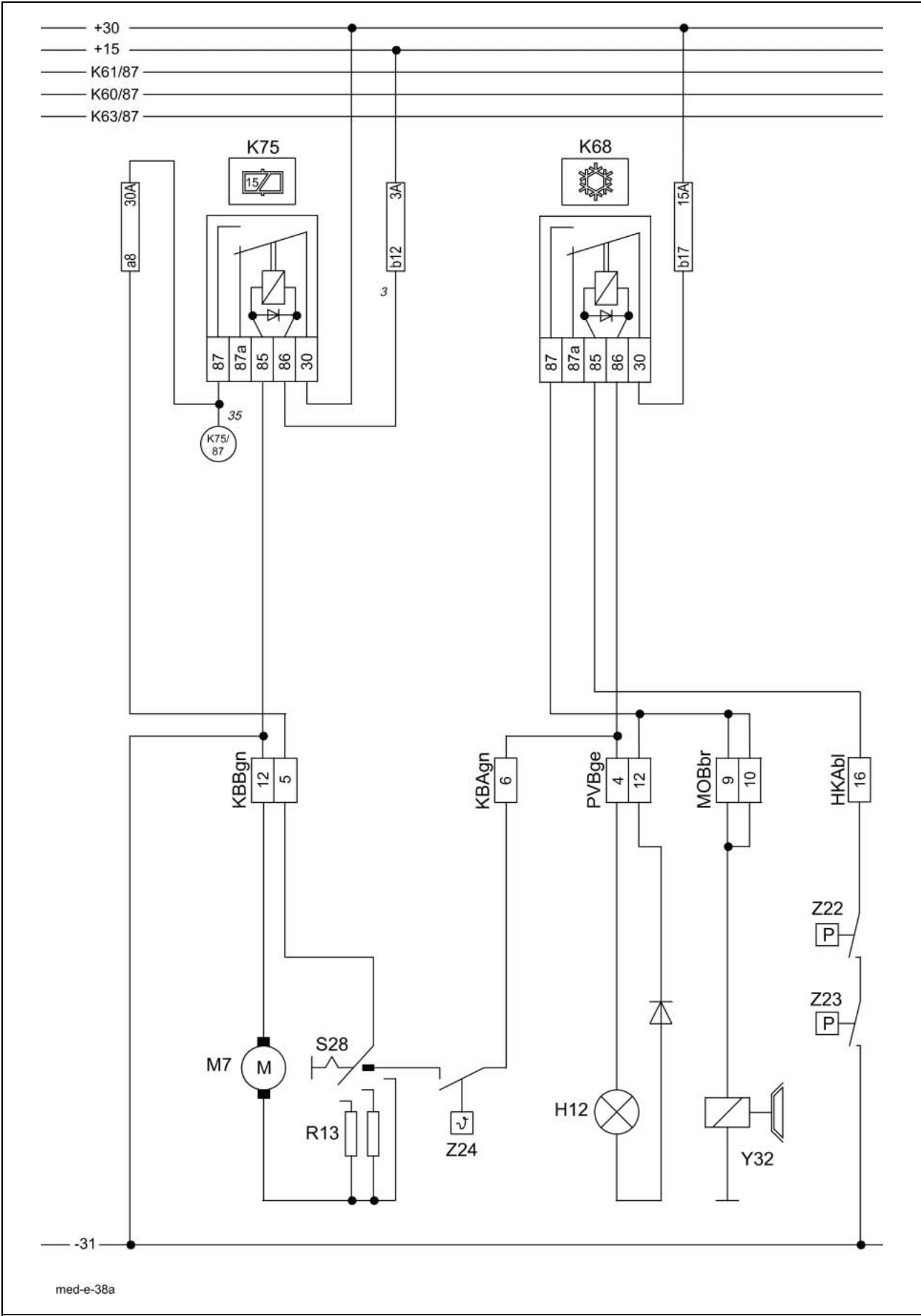
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
LSAgr - 1	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
LSAgr - 2	a11a					1.5	bk/vi
M15 - 31						1.5	br
M15 - 31B						1.5	br/bl
M15 - 53						1.5	bk/bl
M15 - 53A						1.5	bk/vi
S43 - 10						1.5	br
S43 - 2						1.5	bk/vi
S43 - 3						1.5	vi
S43 - 5						1.5	br/bl
S43 - 6						1.5	bk/bl
S43 - 7						1.5	br
S43 - 9						1.5	bk/vi

38a

**Compressor-type air conditioner,
cab fan**

- Automatic air conditioner see 38b

38a Compressor-type air conditioner, cab fan



Key to diagram:

		Coordinates
H12	Compressor-type air conditioner fault signal lamp	4-g-17
K68	Cooling system relay.....	4-g-17
K75	Additional power supply relay	4-g-17
M 7	Cab fan motor	2-f-18
R13	Cab fan series resistor	2-f-18
S28	Cab fan switch	2-f-18
Y32	Compressor-type air conditioner clutch solenoid coil	3-j-19
Z22	Compressor-type air conditioner high pressure actual value switch.....	2-j-17
Z23	Compressor-type air conditioner low pressure actual value switch.....	2-j-17
Z24	Compressor-type air conditioner temperature actual value switch.....	2-f-18

Measured value table:

Item	Component	Measured value	Remark
K68 K75	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y32	Solenoid coils	3.0 A 4.0 Ω	

Description of function:

Compressor-type air conditioner circuit

The electro-magnetic clutch of the compressor-type air conditioner only switches as a function of the actuated relays K75 and K68. In addition, a fan speed must be pre-selected.

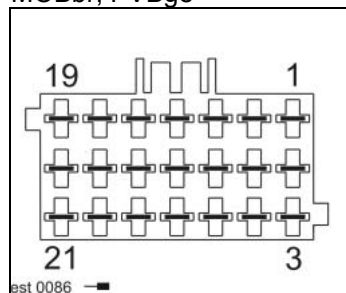
Important! The system is pressure-monitored by switches Z22 and Z23.

- The high-pressure switch opens at 24 bar and closes at 18 bar.
- The low-pressure switch opens below 2 bar and closes at 2.25 bar.

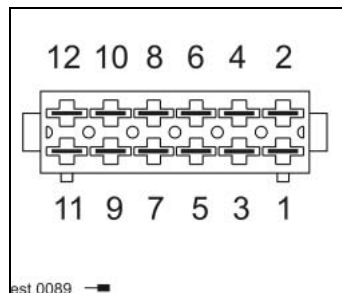
If the earth signal fails due to one of the two gas-pressure switches Z22 or Z23, the electro-magnetic clutch Y32 is disengaged. This malfunction is displayed by warning light H12.

Connector pin assignment:

Connector HKAbI, KBAgn, MOBbr, PVBge



Connector KBBgn

**Interconnection list:**

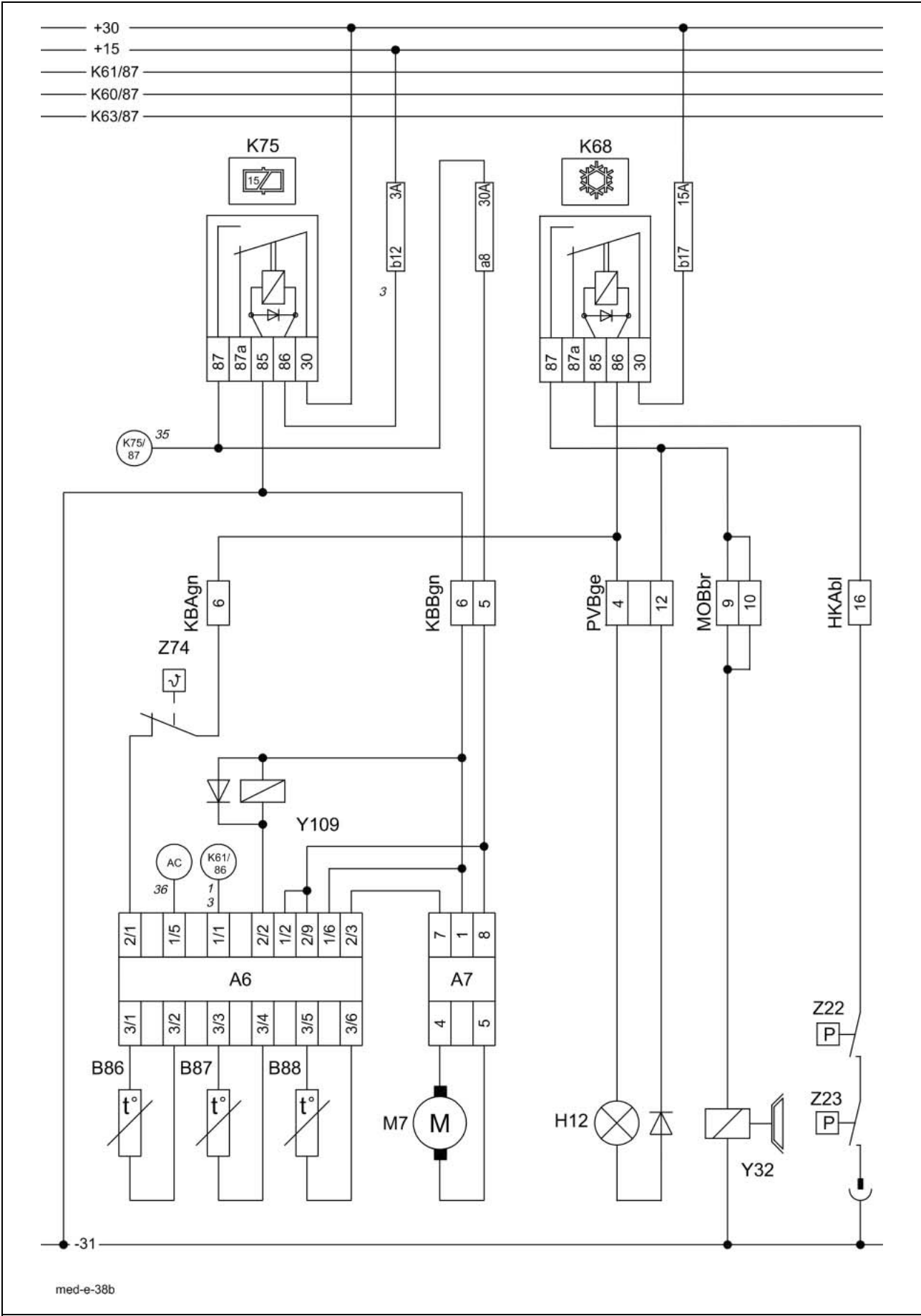
from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
HKAbI - 16	K68/85					0.75	gn/vi
KBAgn - 6	PVB 4	K68/86				0.75	rd/gn
KBBgn - 5	a8a					4	bk
KBBgn - 12	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
MOBbr - 9	K68/87	PVB 12	MOB 10			1.5	bk/gn
MOBbr - 10	MOB 9	K68/87	PVB 12			1.5	bk/gn
PVBge - 4	KBA6	K68/86				0.5	rd/gn
PVBge - 12	MOB 9	K68/87	MOB 10			0.75	gn/vi

38b

Automatic air conditioner

-

38b Automatic air conditioner



Key to diagram:

		Coordinates
A6	Automatic air conditioner module	2-f-18
A7	Cab fan speed controller module.....	2-f-18
B86	AC cab temperature sensor	2-g-17
B87	AC air discharge temperature sensor	2-f-18
B88	AC outside temperature sensor	2-g-19
H12	Compressor-type air conditioner fault signal light.....	4-g-17
K68	Cooling system relay.....	4-g-17
K75	Additional power supply relay	4-g-17
M 7	Cab fan motor	2-f-18
Y32	Compressor-type air conditioner clutch solenoid coil	3-j-19
Y109	Heater solenoid coil	2-f-18
Z22	Compressor-type air conditioner high pressure actual value switch.....	2-j-17
Z23	Compressor-type air conditioner low pressure actual value switch	2-j-17
Z74	Anti-icing device (Climatic).....	2-f-18

Measured value table:

Item	Component	Measured value	Remark
B86	Cab temperature sensor	20° - 97070 Ω -10° - 55330 Ω 0° - 32650 Ω	blue; fault by flashing code in display
B87	Air discharge temperature sensor	10° - 19900 Ω 20° - 12490 Ω 30° - 8057 Ω	yellow; fault by flashing code in display
B88	Outside temperature sensor	40° - 5327 Ω 50° - 3603 Ω 60° - 2488 Ω	red; fault by flashing code in display
K68 K75	Remote control relay	85±7 Ω 20 A 40 A	(Pin 85 - Pin 86) (Pin 30 - Pin 87a) (Pin 30 - Pin 87)
Y32	Solenoid coils	3.0 A 4.0 Ω	
Y109	Solenoid coils	0.8 A 15 Ω	Messrs. Konvekta

Description of function:

Automatic air conditioner

Together with the cab fan speed controller module (A7), the automatic air conditioner module (A6) provides the complete temperature control inside the cab.

This involves both actuating the compressor-type air conditioner clutch solenoid coil (Y32) for the cooling compressor via relay K68 and switching the heater circuit on and off if required via the heater solenoid coil (Y109) until the set values are identical with the actual values of the corresponding sensors.

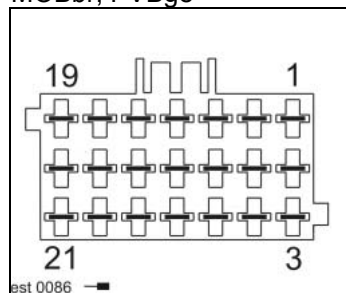
The two closed gas-pressure switches Z22/Z23 must supply relay K68 with earth in order to allow the function of the compressor-type air conditioner electro-magnetic clutch solenoid coil (Y32).

If the earth signal fails due to one of the two gas-pressure switches (Z22/Z23), the compressor-type air conditioner electro-magnetic clutch solenoid coil (Y32) disengages and this fault is displayed by the compressor-type air conditioner fault signal light H12.

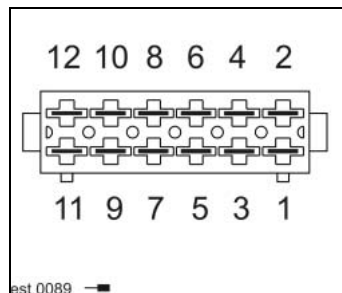
The anti-icing device switch Z74 prevents icing on the evaporator.

Connector pin assignment:

Connector HKAb1, KBAgn, MOBbr, PVBge



Connector KBBgn

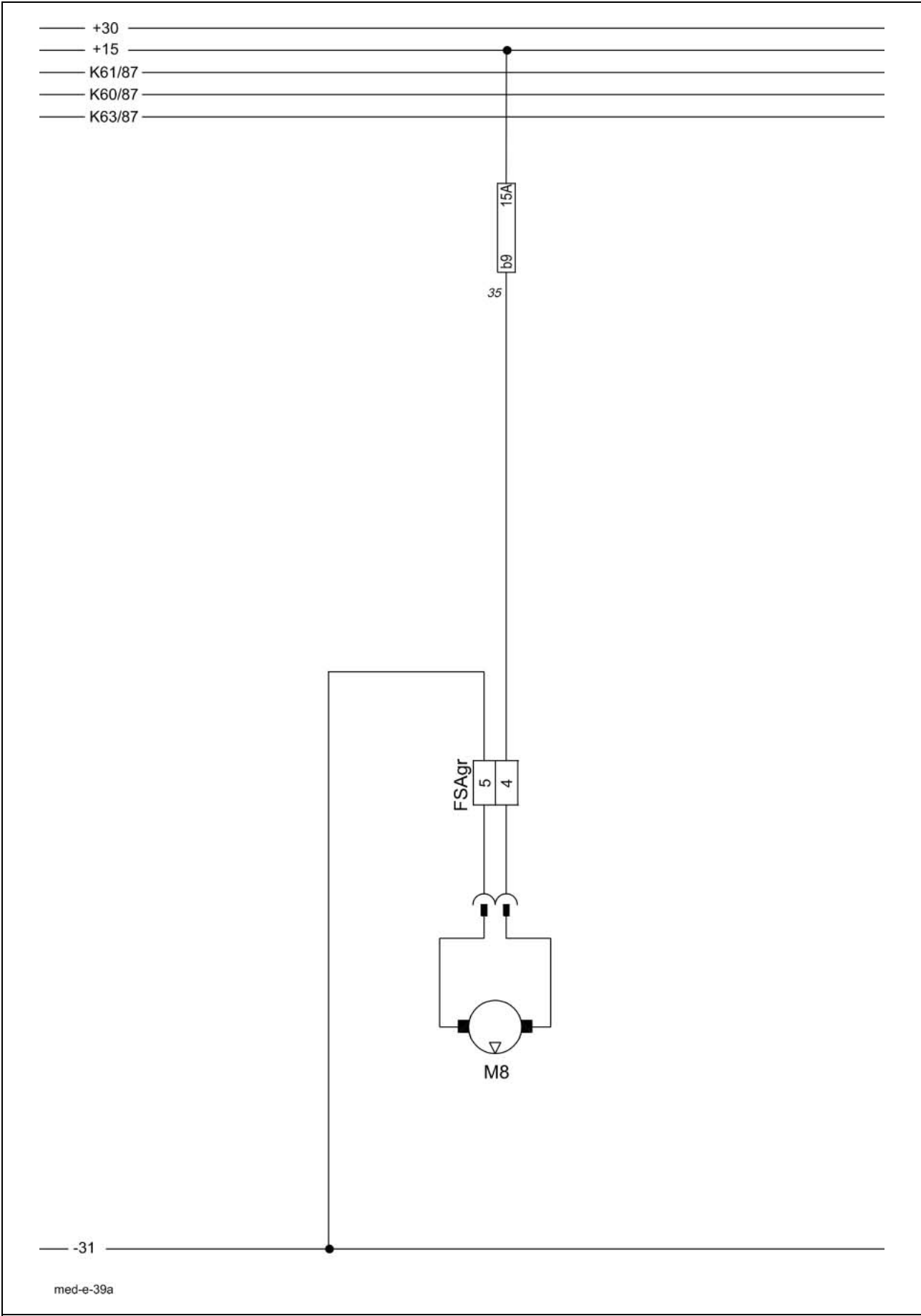
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
A6 - 1/ 1						0.75	bl
A6 - 1/ 2						0.75	bk
A6 - 1/ 5						0.75	bk
A6 - 1/ 6						1.0	br
A6 - 2/ 2						1.5	bk/ye
A6 - 2/ 3						1.5	bk/vi
A6 - 2/ 9						0.75	bk
A7 - 1						2.5	br
A7 - 4						2.5	rd/bl
A7 - 5						2.5	bl/wh
A7 - 7						1.5	bk/vi
A7 - 8						2.5	bk
HKAb1 - 16	K68/85					0.75	gn/vi
KBAgn - 6	PVB 4	K68/86				0.75	rd/gn
KBBgn - 5	a8a					4	bk
KBBgn - 6	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	4	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
MOBbr - 9	K68/87	PVB 12	MOB 10			1.5	bk/gn
MOBbr - 10	MOB 9	K68/87	PVB 12			1.5	bk/gn
PVBge - 4	KBA6	K68/86				0.5	rd/gn
PVBge - 12	MOB 9	K68/87	MOB 10			0.75	gn/vi

39a

Air-suspended seat compressor

39a Air-suspended seat compressor



Key to diagram:

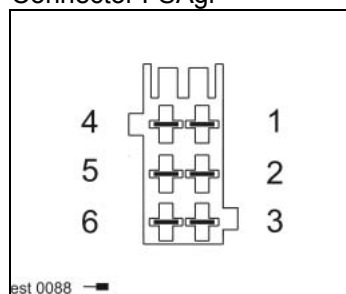
		Coordinates
M 8	Operator's seat compressor.....	4-h-18

Description of function:

None

Connector pin assignment:

Connector FSAgr

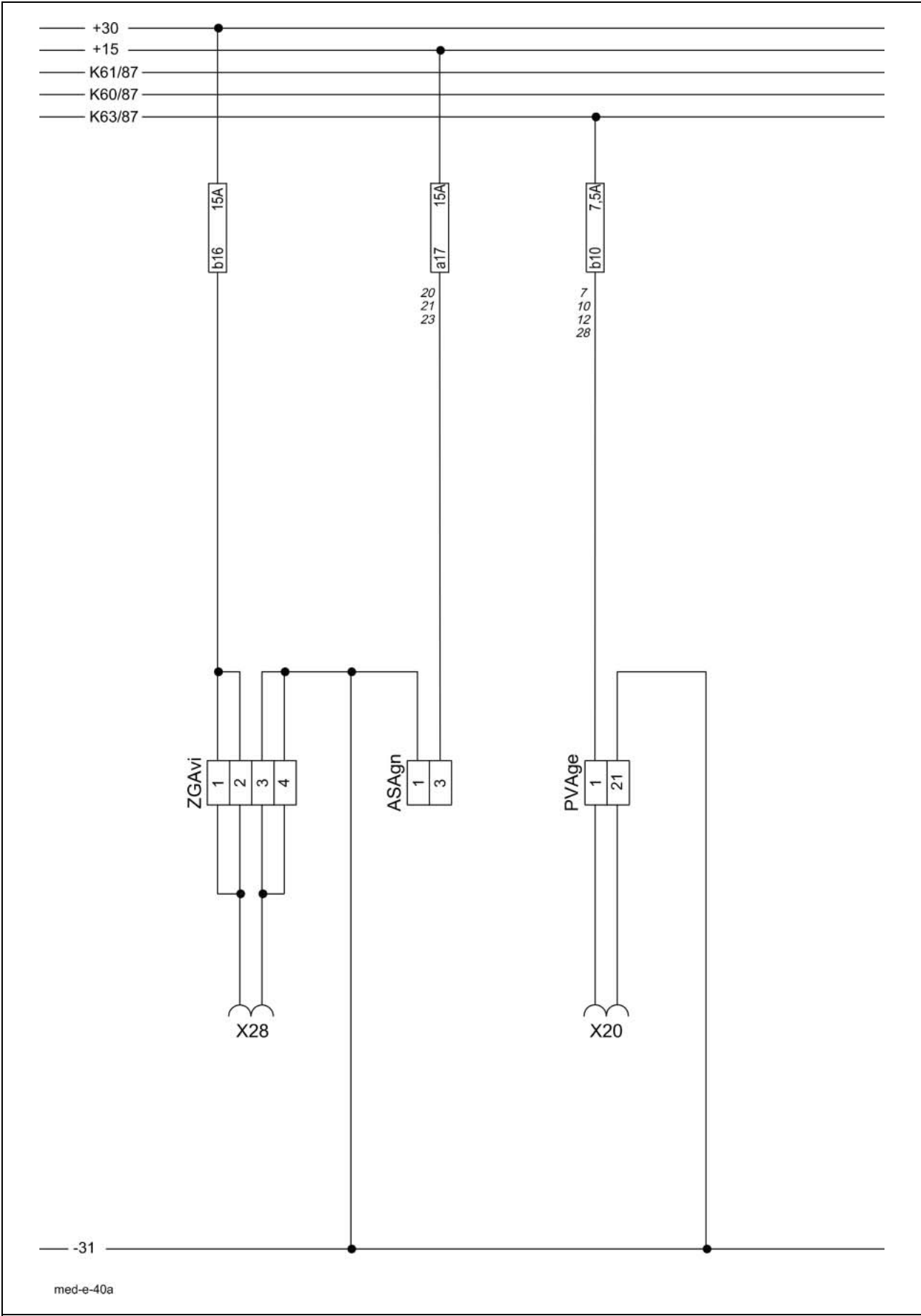
**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
FSAgr - 4	BLA 3	b9a				1.5	bk
FSAgr - 5	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

40a

Additional sockets

40a Additional sockets



Key to diagram:

X20

X28

Plug-in connection for additional devices

Plug-in connection for additional devices

Coordinates

4-g-17

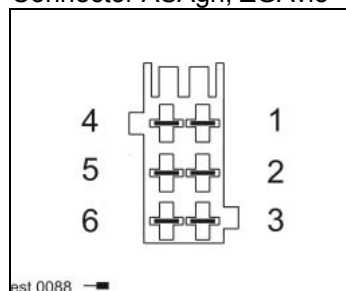
4-g-17

Description of function:

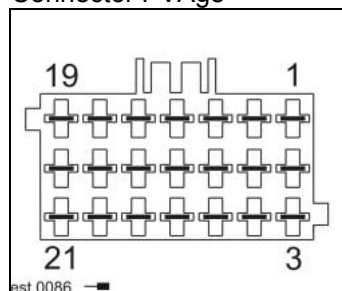
None

Connector pin assignment:

Connector ASAgN, ZGAvio



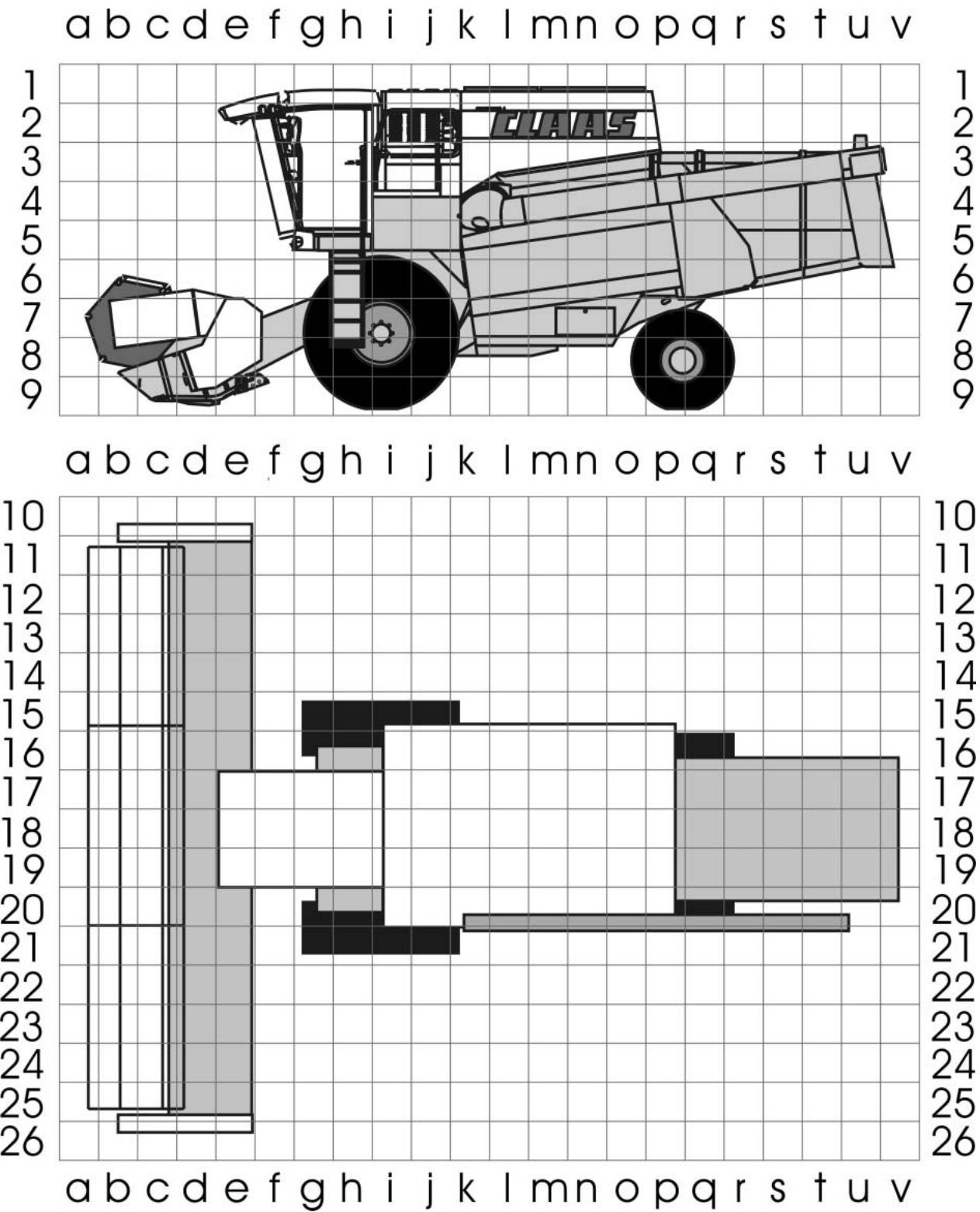
Connector PVAge

**Interconnection list:**

from	to 1	to 2	to 3	to 4	to 5	mm ²	Colour
PVAge - 1	PHA 15	K72/86	b10a	MOA 1	K71/86	1.5	bk/gr
PVAge - 21	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
ZGAvio - 1	b16a	ZGA 2				1.5	rd
ZGAvio - 2	b16a	ZGA 1				1.5	rd
ZGAvio - 3	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						
ZGAvio - 4	EARTH	PVA 21	PVB 6	MFA 1	MFA 2	1.5	br
	LSB 10	LSB 4	PVC 12	CAC 8	CAC 17		
	AP 8	AP 9	KBB 6	KBB 8	K60/85		
	KBA17	MOA 2	HKA 19	PHA 2	FSA 1		
	APA 8	K57/31	K61/85	K52/85	KNA 2		
	K79/30	K69/87a	K70/87a	K71/87a	K53/85		
	K66/85	K77/85	BFA 3	ASA 1	K72/87a		
	K75/85	KBA10	K54/85	ZGA 3	KBA5		
	KBA9	LSA 1	HDA 8	MOB 2	ZGA 4		
	FSA 5	K49/85	K50/85	K73/31	KBB 12		
	BFA 2						

Component grid

Component grid



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